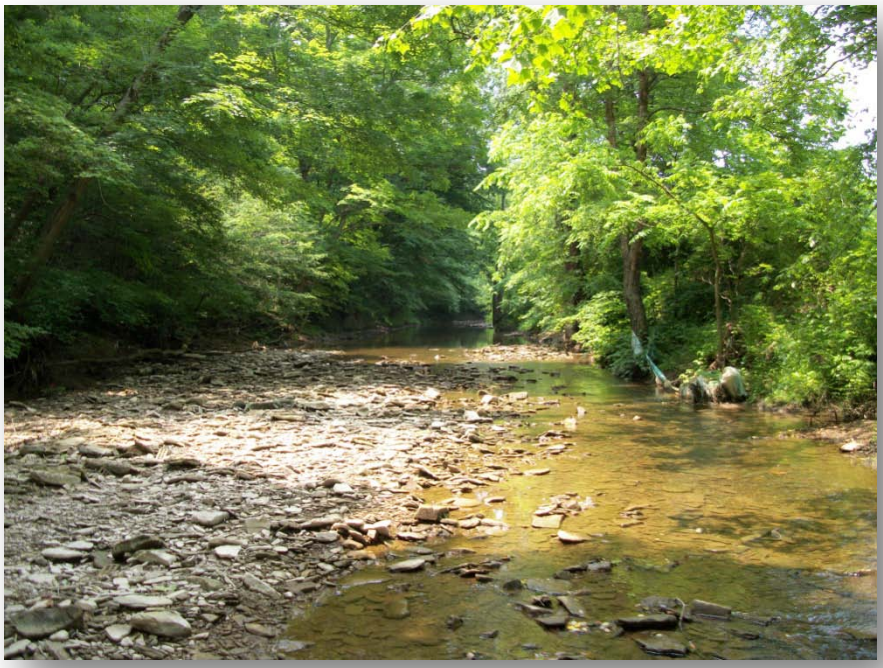
LEVEL 2 ECOLOGICAL SURVEY REPORT

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF ENVIRONMENTAL SERVICES
1980 WEST BROAD STREET
COLUMBUS, OHIO 43223
(614) 466-7100



Project C-R-S / Name:	**SCI-823-0.00 (Phase I)**
Project Identification Number (PID):	**19415**
Report Type:	**Level 2 ESR**
Report Author(s):	**Jason Earley, Len Mikles, Rick Paul**
Affiliation:	**ASC Group**
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Date of Submission:	**9/19/2011**

PROJECT SUMMARY

LOCATION DATA	
ODOT District:	**District 9**
County(ies):	**Scioto**
Township(s):	**Madison and Harrison**
Project Center (lat./long.):	**38.85054°, -82.87094°**
Project Area Size (Ac):	**310 acres +/-**

PROJECT DESCRIPTION

The overall Portsmouth bypass project will provide a missing link in the Appalachian Development Highway System to improve travel time and regional mobility, avoiding 30 traffic signals, 80 intersections and 500 driveways over the entire 26-mile route. A new roadway will result in a time savings of 16 minutes per trip (off peak) compared to the current through route. In addition to transportation benefits, a primary purpose is to provide access to suitable property (relatively flat) for economic development in the economically depressed region surrounding Portsmouth, Ohio, which consistently experiences unemployment and poverty rates of more than twice the statewide average.

ODOT will construct a new four-lane limited access highway/bypass of Portsmouth, Ohio as part of the Appalachian Development Highway system. This Ecological Survey Report (ESR) was conducted on Construction Phase 1 of the project. Phase 1 of the project shall be constructed from the TR 234 (Shumway Hollow Road) Interchange near the Scioto County Airport to an interchange at CR 28 (Lucasville-Minford Road). This phase is 3.32 miles long and contains four bridges and two interchanges. Upon completion of this phase, the roadway will be open to local traffic and provide a direct connection between CR 228 and SR 335.

Phase 1 shall be constructed from an interchange at the relocated TR 234 (Shumway Hollow Road) near the Scioto County Airport to an interchange at CR 28 (Lucasville-Minford Road). This phase is 3.32 miles long and contains four bridges and two interchanges. Major items of work for this phase of the project are as follows:

- Construct the TR 234 (Shumway Hollow Road)/SCI-823 interchange.
- Construct the CR 28 (Lucasville-Minford Road)/SCI-823 interchange.
- Construct Bridge No. SCI-823 L&R 0837 L&R over Swauger Valley-Minford Road and Harrison Furnace Creek.
- Construct Bridge No. SCI-823-0917 L&R over Portsmouth-Minford Road (SR 139) and Long Run Creek.

ECOLOGICAL IMPACT SUMMARY (Impacts may be preliminary and subject to revision)

Stream Impacts: 9,608 feet of WWH, Modified Class II PHWH, Class II PHWH, Class I PHWH
Wetland Impacts: Total Wetland Impacts = 3.893 acres (0.057 acre of Provisional Category 1 Abutting Wetlands, 1.309 acres of Provisional Category 1 Adjacent Wetlands, 0.625 acre of Provisional Category 2 Abutting Wetlands, and 1.902 acres of Provisional Category 2 Adjacent Wetlands).
Potentially Jurisdictional Ditch Impacts: 178 feet or 0.02 acre
Pond/Lake/Reservoir Impacts: 2.70 acres
Vegetative Community Impacts: Approximate Vegetative Community Impacts include: Barren Land –

24 acres, Cultivated Crops – 13 acres, Developed Open Space – 19 acres, Grassland/Herbaceous – 113 acres, Open Water – 3 acres, Pasture/Hay – 30 acres, Scrub/Shrub – 3 acres, and Upland Forest – 123 acres.

Federally Listed Species Impacts: None

State-Listed Species Impacts: Impacts to the State Endangered Southern Monkshood (*Aconitum uncinatum*), State Potentially Threatened American Chestnut (*Castanea dentata*), and the State Endangered Primrose-leaved Violet (*Viola primulifolia*) are likely.

LITERATURE REVIEW			
Literature Source(s) Reviewed (check all that apply)		Results of Review	Map Included In Appendix
☑	Ecoregion Map	List Ecoregion(s): **70f. Ohio-Kentucky Coniferous Plateaus 70d. Lower Scioto Dissected Plain**	**YES** Figure 3
☑	Physiographic Regions Map of Ohio	List Physiographic Region(s): **15.0 Shawnee-Mississippian Plateau (Choose Physiographic Region)**	**YES** Figure 8
☑	USGS 7.5 Minute Topographic Quadrangle Maps	List quadrangle(s): Minford; New Boston	**Map Required** Figure 1
☑	County Soil Survey	Mapped hydric soils within project area? **NO**	**Map Required** Figure 9
☑	Ohio Water Quality Standards (Ohio Administrative Code, Chapter 3745-1)		Not Applicable
☑	Biological and Water Quality Reports	List reports that cover project area (if applicable):	Not Applicable
☑	Hydrologic Unit Code(s) (HUC)	List 14 Digit Watershed boundaries within project area: **05090103-040-030** - Long Run, **05090103-040-020** - Rocky Fork above McConnell Creek to Little Scioto River [except Long Run], **050901030-040-050** - Little Scioto River below Rocky Fork. to Ohio River [except Frederick Creek]	**YES** Figure 5
☐	Total Maximum Daily Load (TMDL) Program	List TMDL status of project area (If applicable):	**NO**
☐	National and State Wild and Scenic River lists, and the Nationwide Rivers Inventory (NRI)	List river(s) within or near the project area (if within applicable reach): **(Choose River)** **(Choose River)**	**NO**
☑	Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM)	Is the project within a 100-year floodplain**:** **YES**	**YES** Figure 4
☐	Ohio's Coastal Zone Management Area	Is the project within the Coastal Zone Management Area**: NO**	**NO**
☑	National Wetlands Inventory (NWI) and or Ohio Wetland Inventory Mapping (OWI)		**YES** Figure 7
☑	ODNR Division of Natural Areas and Preserves Natural Heritage Database	Are there records for listed species within 1 mile of the project area? **YES** Summarize on **State Listed Species Table**	**YES** Figure 2
☑	Federally Endangered, Threatened, Proposed and Candidate Species in Ohio	List and Summarize on **Federally Listed Species Table**	Not Applicable
☐	Oak Openings Region of Ohio	Is the project located within the Oak Openings Region of Ohio? **NO**	**NO**
☐	Other		

FIELD METHODS	
Field Investigator Name(s):	Jason Earley, Len Mikles, and Rick Paul
Affiliation:	ASC Group, Inc.
Date(s) of Field Work:	5/10/2011 through 7/15/2011, and 9/19/2011
Weather Conditions:	Warm and cloudy, hot and sunny, rain and clear.

Check all that apply

Stream Survey (Habitat and Biology)		
☑	Field Evaluation Manual for Ohio's Primary Headwater Habitat Streams (v 2.3) (OEPA 2009)	
☑	Methods for Assessing Habitat in Flowing Waters: Using the Qualitative Habitat Evaluation Index (QHEI). (OEPA 2006)	
☑	Biological Criteria for the Protection of Aquatic Life: Volume I (OEPA 1987a), Volume II (OEPA 1987b, 2008a), Volume III (OEPA 1989, 2008b),	
☐	ODOT Ecological Manual: Sections 203.2.1.1 -Stream, 203.2.1.5-Fishes, 203.2.1.6-Macrobenthos, 203.2.1.7-Mussels (ODOT 2010)	
☐	Other Methods (describe and cite):	
Wetland Delineation and Classification		
☑	Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1 (Environmental Laboratory 1987)	
	Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual:	
	☐	Midwest Region (Environmental Laboratory 2008)
	☐	Northcentral and Northeast
	☑	Eastern Mountains and Piedmont
☑	Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et.al. 1979)	
☑	Ohio Rapid Assessment Method for Wetlands v. 5.0, User's Manual and Scoring Forms (OEPA 2001)	
☐	Other Methods (describe and cite):	
Other Waters		
☑	ODOT Ecological Manual: Sections 203.2.1.3-Ditches/Swales, 203.2.1.4-Ponds/Lakes (ODOT 2010)	
☐	Other Methods (describe and cite):	
Terrestrial		
☑	ODOT Ecological Manual: Section 203.2.2 -Terrestrial Ecology (ODOT 2010)	
☐	Other Methods (describe and cite):	
Listed Species		
☑	ODOT Ecological Manual: Sections 203.2.3 -Listed Species (ODOT 2010)	
☐	Other Methods (describe and cite):	

FIELD DATA COLLECTION RESULTS

AQUATIC ECOLOGY	
Streams	
Were any streams identified within the project area? (If NO, delete the **Stream Table**)	**YES**
Total number of streams within the project area:	21
Total length of streams within the project area (linear feet):	12,459

Wetlands	
Were any wetlands identified within the project area? (If NO, delete the **Wetland Table**)	**YES**
Total number of wetlands within the project area:	32
Total area of wetlands within the project area (acres):	4.681

Potentially Jurisdictional Ditches	
Were any potentially jurisdictional ditches identified within the project area? (If NO, delete the **Potentially Jurisdictional Ditch Table**)	**YES**
Total number of potentially jurisdictional ditches within the project area:	2
Total area of potentially jurisdictional ditches within the project area (acres):	0.02

Ponds	
Were any ponds identified within the project area? (If NO, delete the **Pond Table**)	**YES**
Total number of ponds within the project area:	5
Total area of ponds within the project area (acres):	2.70

Aquatic Life	
Were any fish communities sampled/observed within the project area? (If NO, delete the **Fish Table**)	**YES**
If yes, total number of fish species identified:	3
Were any aquatic macroinvertebrate communities sampled/observed within the project area? (If NO, delete the **Macroinvertebrate Table**)	**YES**
If yes, total number of aquatic macroinvertebrate species identified:	Observed – Not quantified
Were any mussel communities sampled/observed within the project area? (If NO, delete the **Mussel Table**)	**NO**
If yes, total number of mussel species identified:	0

STREAM TABLE : RESOURCES IDENTIFIED ON FIGURE(S) 11

Stream Name/I.D.:	Photograph #(s):	Receiving Waters:	Drainage Area (mi^2):	14-Digit HUC:	Total Length Within Project Area (lin. ft.):	Is this Stream Captured within the Roadway Ditch:	Stream Hydrology Type:	USACE Flow Characteristics:	Habitat Assessment	Evidence of Mussels Present:	Biological Sampling Conducted			Ohio EPA Aquatic Life Use Designation (may be provisional based on qualitative data):	Anti-degradation Designation:	National or State Wild, Scenic, or NRI Stream, or within 1,000 ft. of a Wild or Scenic:	Within a HUC with an Approved or Pending TMDL:
											Salamanders Observed:	Fish Observed:	Aquatic Macro-invertebrates Observed:				
Stream 17-1-1	19, 20	Sweet Run	0.017	05090103-040-020	210	NO	Ephemeral	Non-Relatively Permanent Water	HHEI 22	NO	Not Surveyed	Not Surveyed	Not Surveyed	Class I PHWH	General High Quality Waters	NO	NO
Additional Information. List how the stream connects to a Traditional Navigable Water (TNW) and any other pertinent observations (such as water quality measurements if taken) :	Stream 17-1-1 -> Sweet Run –> Rocky Fork -> Little Scioto River -> Ohio River.																
Stream 17a/b	41-43, 138, 139	Long Run	0.540	05090103-040-030	983	NO	Perennial (supraficial)	Relatively Permanent Water-Perennial	HHEI 55	NO	Not Surveyed	Not Surveyed - Observed	Not Surveyed	Modified Class II PHWH	General High Quality Waters	NO	NO
Additional Information. List how the stream connects to a Traditional Navigable Water (TNW) and any other pertinent observations (such as water quality measurements if taken) :	Stream 17a/b -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.																
Stream 17c	13, 44, 45	Long Run	0.047	05090103-040-030	985	NO	Intermittent	Relatively Permanent Water-Seasonal	HHEI 47	NO	Not Surveyed	Not Surveyed	Not Surveyed	Modified Class II PHWH	General High Quality Waters	NO	NO
Additional Information. List how the stream connects to a Traditional Navigable Water (TNW) and any other pertinent observations (such as water quality measurements if taken) :	Stream 17c -> Stream 17a/b -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.																
Stream 17c-1	14, 15	Long Run	0.010	05090103-040-030	390	NO	Ephemeral	Non-Relatively Permanent Water	HHEI 43	NO	Not Surveyed	Not Surveyed	Not Surveyed	Modified Class II PHWH	General High Quality Waters	NO	NO
Additional Information. List how the stream connects to a Traditional Navigable Water (TNW) and any other pertinent observations (such as water quality measurements if taken) :	Stream 17c-1 -> Stream 17c -> Stream 17a/b -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.																
Stream 17d	46 - 48	Long Run	0.110	05090103-040-030	320	YES	Intermittent	Relatively Permanent Water-Seasonal	HHEI 59	NO	Not Surveyed	Not Surveyed	Not Surveyed	Modified Class II PHWH	General High Quality Waters	NO	NO
Additional Information. List how the stream connects to a Traditional Navigable Water (TNW) and any other pertinent observations (such as water quality measurements if taken) :	Stream 17d -> Stream 17a/b -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.																

STREAM TABLE : RESOURCES IDENTIFIED ON FIGURE(S) 11

Stream Name/I.D.:	Photograph #(s):	Receiving Waters:	Drainage Area (mi^2):	14-Digit HUC:	Total Length Within Project Area (lin. ft.):	Is this Stream Captured within the Roadway Ditch:	Stream Hydrology Type:	USACE Flow Characteristics:	Habitat Assessment	Evidence of Mussels Present:	Biological Sampling Conducted			Ohio EPA Aquatic Life Use Designation (may be provisional based on qualitative data):	Anti-degradation Designation:	National or State Wild, Scenic, or NRI Stream, or within 1,000 ft. of a Wild or Scenic:	Within a HUC with an Approved or Pending TMDL:
											Salamanders Observed:	Fish Observed:	Aquatic Macro-invertebrates Observed:				
Stream 18 (Long Run)	143, 144	Rocky Fork	14.20	05090103-040-030	638	NO	Perennial (supraficial)	Relatively Permanent Water-Perennial	QHEI 78.5	NO	Not Surveyed	Not Surveyed - Observed	Not Surveyed	Warmwater Habitat	General High Quality Waters	NO	NO
Additional Information. List how the stream connects to a Traditional Navigable Water (TNW) and any other pertinent observations (such as water quality measurements if taken) :	Stream 18 (Long Run) -> Rocky Fork -> Little Scioto River -> Ohio River.																
Stream 18-1	89, 90	Long Run	0.072	05090103-040-030	335	NO	Ephemeral	Non-Relatively Permanent Water	HHEI 39	NO	Not Surveyed	Not Surveyed	Not Surveyed	Modified Class II PHWH	General High Quality Waters	NO	NO
Additional Information. List how the stream connects to a Traditional Navigable Water (TNW) and any other pertinent observations (such as water quality measurements if taken) :	Stream 18-1 -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.																
Stream 18b	91, 92, 94, 95	Long Run	0.180	05090103-040-030	539	NO	Intermittent	Relatively Permanent Water-Seasonal	HHEI 39	NO	Not Surveyed	Not Surveyed	Not Surveyed	Modified Class II PHWH	General High Quality Waters	NO	NO
Additional Information. List how the stream connects to a Traditional Navigable Water (TNW) and any other pertinent observations (such as water quality measurements if taken) :	Stream 18 b -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.																
Stream 19	145, 146	Long Run	0.207	05090103-040-030	649	NO	Perennial (interstitial)	Relatively Permanent Water-Perennial	HHEI 69	NO	Not Surveyed	Not Surveyed	Not Surveyed	Modified Class II PHWH	General High Quality Waters	NO	NO
Additional Information. List how the stream connects to a Traditional Navigable Water (TNW) and any other pertinent observations (such as water quality measurements if taken) :	Stream 19 -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.																
Stream 19-1	147, 148	Long Run	0.047	05090103-040-030	691	NO	Intermittent	Relatively Permanent Water-Seasonal	HHEI 52	NO	Not Surveyed	Not Surveyed	Not Surveyed	Modified Class II PHWH	General High Quality Waters	NO	NO
Additional Information. List how the stream connects to a Traditional Navigable Water (TNW) and any other pertinent observations (such as water quality measurements if taken) :	Stream 19-1 -> Stream 19 -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.																

STREAM TABLE : RESOURCES IDENTIFIED ON FIGURE(S) 11

Stream Name/I.D.:	Photograph #(s):	Receiving Waters:	Drainage Area (mi^2):	14-Digit HUC:	Total Length Within Project Area (lin. ft.):	Is this Stream Captured within the Roadway Ditch:	Stream Hydrology Type:	USACE Flow Characteristics:	Habitat Assessment	Evidence of Mussels Present:	Biological Sampling Conducted			Ohio EPA Aquatic Life Use Designation (may be provisional based on qualitative data):	Anti-degradation Designation:	National or State Wild, Scenic, or NRI Stream, or within 1,000 ft. of a Wild or Scenic:	Within a HUC with an Approved or Pending TMDL:
											Salamanders Observed:	Fish Observed:	Aquatic Macro-invertebrates Observed:				
Stream 20	149, 150	Long Run	0.920	05090103-040-030	515	NO	Perennial (interstitial)	Relatively Permanent Water-Perennial	QHEI 58.5	NO	Not Surveyed - Observed	Not Surveyed - Observed	Not Surveyed	Modified Warmwater habitat	General High Quality Waters	NO	NO
Additional Information. List how the stream connects to a Traditional Navigable Water (TNW) and any other pertinent observations (such as water quality measurements if taken) :	Stream 20 -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.																
Stream 20-1	151, 152	Long Run	0.036	05090103-040-030	1,261	NO	Ephemeral	Non-Relatively Permanent Water	HHEI 47	NO	(Choose)	(Choose)	(Choose)	Class II PHWH	General High Quality Waters	NO	NO
Additional Information. List how the stream connects to a Traditional Navigable Water (TNW) and any other pertinent observations (such as water quality measurements if taken) :	Stream 20-1 -> Stream 20 -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.																
Stream 20-2	102 - 104	Long Run	0.013	05090103-040-030	445	NO	Ephemeral	Non-Relatively Permanent Water	HHEI 23	NO	Not Surveyed	Not Surveyed	Not Surveyed	Modified Class I PHWH	General High Quality Waters	NO	NO
Additional Information. List how the stream connects to a Traditional Navigable Water (TNW) and any other pertinent observations (such as water quality measurements if taken) :	Stream 20-2 flows into former Pond 5. Pond 5 has been breached and Stream 20-2 flows through the old pond basin. Stream 20-2 is a source of hydrology for Wetland 30. Stream loses defined channel and sheet flows to Stream 20 where it eventually discharges into Long Run. Stream 20-2 -> Stream 20 -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.																
Stream 21	60, 61	Long Run	0.040	05090103-040-030	734	NO	Intermittent	Relatively Permanent Water-Seasonal	HHEI 49	NO	None Found	None Found	Not Surveyed	Modified Class II PHWH	General High Quality Waters	NO	NO
Additional Information. List how the stream connects to a Traditional Navigable Water (TNW) and any other pertinent observations (such as water quality measurements if taken) :	Original survey identified 2 Eurycea larva in stream. Sampled for 20 minutes (x 2 people) and did not find any evidence of salamanders within the stream. Stream 21-> RR Ditch -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.																
Stream 21a	51, 53, 54	Long Run	0.039	05090103-040-030	518	NO	Intermittent	Relatively Permanent Water-Seasonal	HHEI 36	NO	Not Surveyed	Not Surveyed	Not Surveyed	Modified Class II PHWH	General High Quality Waters	NO	NO
Additional Information. List how the stream connects to a Traditional Navigable Water (TNW) and any other pertinent observations (such as water quality measurements if taken) :	Stream 21a -> Pond 6 -> RR Ditch -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.																

STREAM TABLE : RESOURCES IDENTIFIED ON FIGURE(S) 11

Stream Name/I.D.:	Photograph #(s):	Receiving Waters:	Drainage Area (mi^2):	14-Digit HUC:	Total Length Within Project Area (lin. ft.):	Is this Stream Captured within the Roadway Ditch:	Stream Hydrology Type:	USACE Flow Characteristics:	Habitat Assessment	Evidence of Mussels Present:	Biological Sampling Conducted			Ohio EPA Aquatic Life Use Designation (may be provisional based on qualitative data):	Anti-degradation Designation:	National or State Wild, Scenic, or NRI Stream, or within 1,000 ft. of a Wild or Scenic:	Within a HUC with an Approved or Pending TMDL:
											Salamanders Observed:	Fish Observed:	Aquatic Macro-invertebrates Observed:				
Stream 22a/b	77, 78, 80, 81	Little Scioto River	0.180	05090103-040-050	1,764	YES	Perennial (supraficial)	Relatively Permanent Water-Perennial	HHEI 67	NO	Not Surveyed	Not Surveyed - Observed	Not Surveyed	Modified Class II PHWH	General High Quality Waters	NO	NO
Additional Information. List how the stream connects to a Traditional Navigable Water (TNW) and any other pertinent observations (such as water quality measurements if taken) :	Stream 22a/b -> Little Scioto River -> Ohio River.																
Stream 22a-1	73, 74	Little Scioto River	0.030	05090103-040-050	342	NO	Ephemeral	Non-Relatively Permanent Water	HHEI 43	NO	Not Surveyed	Not Surveyed	Not Surveyed	Modified Class II PHWH	General High Quality Waters	NO	NO
Additional Information. List how the stream connects to a Traditional Navigable Water (TNW) and any other pertinent observations (such as water quality measurements if taken) :	Stream 22a-1 discharges into Pond 8. Pond 8 discharges via sheet flow and pipes to Stream 22a/b. Stream 22a-1 -> Pond 8 -> Stream 22a/b -> Little Scioto River -> Ohio River.																
Stream 23/k	126, 127	Little Scioto River	0.047	05090103-040-050	571	NO	Intermittent	Relatively Permanent Water-Seasonal	HHEI 53	NO	None Found	None Found	Not Surveyed	Class II PHWH	General High Quality Waters	NO	NO
Additional Information. List how the stream connects to a Traditional Navigable Water (TNW) and any other pertinent observations (such as water quality measurements if taken) :	No evidence of salamanders found in this stream during the ecological investigation. No mayfly or stonefly larvae were observed within the stream during the field investigation. Stream 23/k -> Stream 22a/b -> Little Scioto River -> Ohio River																
Stream 24-1	128	Little Scioto River	0.030	05090103-040-050	441	NO	Ephemeral	Non-Relatively Permanent Water	HHEI 36	NO	Not Surveyed	Not Surveyed	Not Surveyed	Modified Class II PHWH	General High Quality Waters	NO	NO
Additional Information. List how the stream connects to a Traditional Navigable Water (TNW) and any other pertinent observations (such as water quality measurements if taken) :	Stream 24-1 -> Stream 22a/b -> Little Scioto River -> Ohio River.																
Stream 18-2	159	Long Run	0.054	05090103-040-030	98	NO	Intermittent	Relatively Permanent Water-Seasonal	HHEI 53	NO	Not Surveyed	Not Surveyed	Not Surveyed	Modified Class II PHWH	General High Quality Waters	NO	NO
Additional Information. List how the stream connects to a Traditional Navigable Water (TNW) and any other pertinent observations (such as water quality measurements if taken) :	Stream 18-2 -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.																

STREAM TABLE : RESOURCES IDENTIFIED ON FIGURE(S) 11

Stream Name/I.D.:	Photograph #(s):	Receiving Waters:	Drainage Area (mi^2):	14-Digit HUC:	Total Length Within Project Area (lin. ft.):	Is this Stream Captured within the Roadway Ditch:	Stream Hydrology Type:	USACE Flow Characteristics:	Habitat Assessment	Evidence of Mussels Present:	Biological Sampling Conducted			Ohio EPA Aquatic Life Use Designation (may be provisional based on qualitative data):	Anti-degradation Designation:	National or State Wild, Scenic, or NRI Stream, or within 1,000 ft. of a Wild or Scenic:	Within a HUC with an Approved or Pending TMDL.:
											Salamanders Observed:	Fish Observed:	Aquatic Macro-invertebrates Observed:				
Stream 18-2-1	160	Long Run	0.01	05090103-040-030	30	YES	Intermittent	Relatively Permanent Water-Seasonal	HHEI 37	NO	Not Surveyed	Not Surveyed	Not Surveyed	Modified Class II PHWH	General High Quality Waters	NO	NO

Additional Information. List how the stream connects to a Traditional Navigable Water (TNW) and any other pertinent observations (such as water quality measurements if taken) :	Stream 18-2-1 ->18-2 -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.

WETLAND TABLE : RESOURCES IDENTIFIED ON FIGURE(S) 11 & 12												
Wetland Name/I.D.:	**Photograph #(s):**	**Hydrologic Connection:**	**Receiving Waters (if non-isolated):**	**14-Digit HUC Boundary the Wetland is Located within:**	**Located Within a Mapped Hydric Soil Unit(s):**	**Approximate Total Size (Ac.):**	**Wetland Area Located within the Project Area (Ac.):**	**ORAM Assessment Score:**	**Provisional Wetland Category (based on ORAM):**	**Known High Quality Wetland (from Natural Heritage Database):**	**Dominant Wetland Community(ies) Based on Cowardin (1979) Wetland Classifications:**	**Estimated Hydroperiod (Cowardin, 1979)**
Wetland 1	1	Adjacent	Stream 17a/b	05090103-040-030	NO MoC2	0.141	0.141	23.5	Category 1	NO	Palustrine - Emergent Wetland Persistent (Choose Additional) (Choose Additional)	Seasonally Flooded
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :			Wetland 1 is hydrologically connected to Stream 17a/b via sheet flow and erosional channels. Stream 17 a/b -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.									
Wetland 2/3	2, 3	Adjacent	Stream 17a/b	05090103-040-030	NO MoC2	0.517	0.517	31.5	Modified Category 2	NO	Palustrine - Emergent Wetland Persistent (Choose Additional) (Choose Additional)	Seasonally Flooded
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :			Wetland 2/3 is hydrologically connected to Stream 17a/b via sheet flow and erosional features. Stream 17 a/b -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.									
Wetland 4	7	Adjacent	Stream 17a/b	05090103-040-030	NO MoC2	0.089	0.089	30.5	Modified Category 2	NO	Palustrine - Emergent Wetland Persistent (Choose Additional) (Choose Additional)	Seasonally Flooded
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :			Wetland 4 is connected to Stream 17a/b via a culvert. Stream 17 a/b -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.									
Wetland W8WL6	4	Abutting	Stream 17a/b	05090103-040-030	NO Ha, MoC2	0.290	0.221	32.5	Modified Category 2	NO	Palustrine - Emergent Wetland Persistent (Choose Additional) (Choose Additional)	Seasonally Flooded
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :			Wetland W8WL6 abuts stream 17a/b outside the project limits. Stream 17 a/b -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.									
Wetland W8WL8	13	Abutting	Stream 17c	05090103-040-030	NO MoC2, ErD	0.020	0.020	28.5	Category 1	NO	Palustrine - Emergent Wetland Persistent (Choose Additional) (Choose Additional)	Seasonally Flooded
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :			Wetland W8WL8 abuts stream 17c. Stream 17c -> Stream 17 a/b -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.									
Wetland 5/ W8WL7	8	Abutting	Stream 17a/b	05090103-040-030	NO Ha	0.066	0.066	39.5	Modified Category 2	NO	Riverine - Emergent Wetland Nonpersistent (Choose Additional) (Choose Additional)	Semipermanently Flooded
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :			Wetland 5/W8WL7 abuts stream 17a/b. Stream 17 a/b -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.									
Wetland 6	9	Adjacent	Stream 17a/b	05090103-040-030	NO MoC2	0.018	0.018	30.5	Modified Category 2	NO	Palustrine - Emergent Wetland Persistent (Choose Additional) (Choose Additional)	Seasonally Flooded

WETLAND TABLE : RESOURCES IDENTIFIED ON FIGURE(S) 11 & 12												
Wetland Name/I.D.:	**Photograph #(s):**	**Hydrologic Connection:**	**Receiving Waters (if non-isolated):**	**14-Digit HUC Boundary the Wetland is Located within:**	**Located Within a Mapped Hydric Soil Unit(s):**	**Approximate Total Size (Ac.):**	**Wetland Area Located within the Project Area (Ac.):**	**ORAM Assessment Score:**	**Provisional Wetland Category (based on ORAM):**	**Known High Quality Wetland (from Natural Heritage Database):**	**Dominant Wetland Community(ies) Based on Cowardin (1979) Wetland Classifications:**	**Estimated Hydroperiod (Cowardin, 1979)**
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :	Wetland 6 is hydrologically connected to Stream 17a/b via sheet flow and erosional channels that are found throughout this area. Stream 17 a/b -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.											
Wetland 7	10, 11	Adjacent	Stream 17a/b	05090103-040-030	NO ErD	0.108	0.108	21	Category 1	NO	Palustrine - Emergent Wetland Nonpersistent (Choose Additional) (Choose Additional)	Saturated
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :	Wetland 7 is located at the previously identified Pond 3. The berm of the pond has been removed leaving a mudflat dominated wetland with a cat-tail dominated fringe area. Wetland 7 drains through a series of erosional channels and eventually discharges into Stream 17a/b. Stream 17 a/b -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.											
Wetland 8	12	Adjacent	Stream 17a/b	05090103-040-030	NO MoC2	0.028	0.028	30.5	Modified Category 2	NO	Palustrine - Emergent Wetland Persistent (Choose Additional) (Choose Additional)	Seasonally Flooded
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :	Wetland 8 is hydrologically connected to Stream 17a/b via sheet flow and erosional channels. Stream 17 a/b -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.											
Wetland 9	16	Abutting	Stream 17c-1	05090103-040-030	NO SfE	0.081	0.073	35.5	Modified Category 2	NO	Riverine - Emergent Wetland Nonpersistent (Choose Additional) (Choose Additional)	Seasonally Flooded
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :	Wetland 9 is located in a small valley and is the headwaters of Stream 17c-1. Wetland 9 exists as an emergent area with drainage patterns in the form of a braided channel. Down slope of Wetland 9, Stream 17c-1 exhibits a OHWM and a defined bed and bank, Stream 17c-1 flows through Wetland W8WL8, then to Stream 17a/b. Stream 17 a/b -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.											
Wetland 12	25-30	Adjacent	Sweet Run	05090103-040-020 05090103-040-030	NO MoC2, ErD	1.233	0.811	39.0	Modified Category 2	NO	Palustrine - Emergent Wetland Persistent (Choose Additional) (Choose Additional)	Seasonally Flooded
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :	Wetland 12 is hydrologically connected to Sweet Run via sheet flow and erosional channels. Sweet Run –> Rocky Fork -> Little Scioto River -> Ohio River.											
Wetland 13	31	Adjacent	Stream 17a/b	05090103-040-030	NO MoC2	0.233	0.233	35	Modified Category 2	NO	Palustrine - Emergent Wetland Persistent (Choose Additional) (Choose Additional)	Seasonally Flooded
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :	Wetland 13 is hydrologically connected to Stream 17a/b via sheet flow and erosional channels. Stream 17 a/b -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.											
Wetland 14	32	Adjacent	Stream 17a/b	05090103-040-030	NO MoC2	0.010	0.010	19.5	Category 1	NO	Palustrine - Emergent Wetland Persistent (Choose Additional) (Choose Additional)	Seasonally Flooded

WETLAND TABLE : RESOURCES IDENTIFIED ON FIGURE(S) 11 & 12												
Wetland Name/I.D.:	**Photograph #(s):**	**Hydrologic Connection:**	**Receiving Waters (if non-isolated):**	**14-Digit HUC Boundary the Wetland is Located within:**	**Located Within a Mapped Hydric Soil Unit(s):**	**Approximate Total Size (Ac.):**	**Wetland Area Located within the Project Area (Ac.):**	**ORAM Assessment Score:**	**Provisional Wetland Category (based on ORAM):**	**Known High Quality Wetland (from Natural Heritage Database):**	**Dominant Wetland Community(ies) Based on Cowardin (1979) Wetland Classifications:**	**Estimated Hydroperiod (Cowardin, 1979)**
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :			Wetland 14 is hydrologically connected to Stream 17a/b via sheet flow and erosional channels. Stream 17 a/b -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.									
Wetland 15	33	Adjacent	Sweet Run	05090103-040-020	NO MoC2, ErD	0.041	0.041	33.5	Modified Category 2	NO	Palustrine - Emergent Wetland Persistent (Choose Additional) (Choose Additional)	Seasonally Flooded
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :			Wetland 15 is hydrologically connected to Sweet Run via sheet flow and erosional channels. Sweet Run –> Rocky Fork -> Little Scioto River -> Ohio River.									
Wetland 16	46	Abutting	Stream 17d	05090103-040-030	NO Ha	0.036	0.036	26	Category 1	NO	Palustrine - Emergent Wetland Persistent Riverine - Aquatic Bed (Choose Additional)	Seasonally Flooded
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :			Wetland 16 abuts Stream 17d. Stream 17d -> Stream 17 a/b -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.									
Wetland 17	50	Adjacent	Pond beyond limits of eco survey	05090103-040-030	NO OmB, SbD	0.094	0.001	35.5	Modified Category 2	NO	Palustrine - Emergent Wetland Persistent (Choose Additional) (Choose Additional)	Seasonally Flooded
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :			Wetland 17 is hydrologically connected to a pond northeast of the project area via sheet flow. This pond likely outlets via an outflow structure and eventually enters the RR drainage to the east. The RR drainage eventually discharges into Long Run. Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.									
Wetland 18/ W9WL2	51	Abutting	Stream 21a	05090103-040-030	NO OmB	0.054	0.038	35.5	Modified Category 2	NO	Palustrine - Scrub/Shrub Wetland Palustrine - Emergent Wetland Persistent (Choose Additional)	Semipermanently Flooded
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :			Wetland 18/W9WL2 is located downstream of the outfall structure of Pond 6. This wetland is located within a braided portion of Stream 21a. Stream 21a -> RR Ditch -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.									
Wetland 19	52	Abutting	Stream 21a	05090103-040-030	NO OmB, SbD	0.180	0.180	49	Category 2	NO	Open Water (Unconsolidated Bottom/Shore) Palustrine - Emergent Wetland Persistent (Choose Additional)	Intermittently Exposed
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :			Wetland 19 is located along the fringe of Pond 6, which is an impounded portion of Stream 21a. Pond 6 discharges to the northwest into Wetland 18/W9WL2, which is flows to the northwest in a series of braided channels before returning to a defined channel near the project area boundary. Stream 21a eventually discharges into the RR ditch. Stream 21a -> Pond 6 -> Wetland 18/W9WL2 -> Stream 21a -> RR Ditch -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.									
Wetland 20	57	Adjacent	Stream 21a	05090103-040-030	NO OmB	0.089	0.062	37	Modified Category 2	NO	Palustrine - Emergent Wetland Persistent (Choose Additional) (Choose Additional)	Seasonally Flooded

WETLAND TABLE : RESOURCES IDENTIFIED ON FIGURE(S) 11 & 12												
Wetland Name/I.D.:	**Photograph #(s):**	**Hydrologic Connection:**	**Receiving Waters (if non-isolated):**	**14-Digit HUC Boundary the Wetland is Located within:**	**Located Within a Mapped Hydric Soil Unit(s):**	**Approximate Total Size (Ac.):**	**Wetland Area Located within the Project Area (Ac.):**	**ORAM Assessment Score:**	**Provisional Wetland Category (based on ORAM):**	**Known High Quality Wetland (from Natural Heritage Database):**	**Dominant Wetland Community(ies) Based on Cowardin (1979) Wetland Classifications:**	**Estimated Hydroperiod (Cowardin, 1979)**
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :	Wetland 20 is a linear wetland that slopes towards Stream 21a and is hydrologically connected via sheet flow. Stream 21a -> RR Ditch -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.											
Wetland 21	58	Adjacent	Stream 21a	05090103-040-030	NO OmB	0.085	0.082	28	Category 1	NO	Palustrine - Emergent Wetland Persistent (Choose Additional) (Choose Additional)	Seasonally Flooded
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :	Wetland 21 is a linear wetland that slopes towards Stream 21a. Wetland 21 appears to be hydrologically connected to Stream 21a via sheet flow. Stream 21a -> RR Ditch -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.											
W9WL4	59	Adjacent	Stream 21	05090103-040-030	NO ErD	0.029	0.029	34	Modified Category 2	NO	Palustrine - Emergent Wetland Persistent (Choose Additional) (Choose Additional)	Seasonally Flooded
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :	Wetland W9WL4 is hydrologically connected to Stream 21 via sheet flow. Stream 21-> RR Ditch -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.											
Wetland 22	62	Adjacent	Outlet tile at Pond 7	05090103-040-030	NO MoC2	0.344	0.344	28	Category 1	NO	Open Water (Unconsolidated Bottom/Shore) Palustrine - Emergent Wetland Persistent (Choose Additional)	Semipermanently Flooded
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :	Wetland 22 is a fringe wetland associated with Pond 7. No channels were identified entering into Pond 7 and it appears that the main source of hydrology is sheet flow. During the field investigation it was determined that Pond 7 discharges into a pipe near the southeast corner of the pond. After discharging, it is assumed that the water enters into a tile system associated with the active agricultural field to the east. This tile system likely discharges into the drainage ditches associated with the RR to the east. Pond 7 -> Tiles -> RR Ditch -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.											
Wetland 24	64	Adjacent	Sheet flow to farm tile	05090103-040-030	NO OmB, MoC2	0.069	0.069	29	Category 1	NO	Palustrine - Emergent Wetland Persistent (Choose Additional) (Choose Additional)	Seasonally Flooded
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :	Wetland 24 is hydrologically connected to an agricultural drainage tile, which discharges into the RR Ditch 1, located to the east. RR Ditch -> Stream 22a/b -> Little Scioto River -> Ohio River.											
Wetland 26	66, 67, 69-71	Adjacent	Sheet Flow to RR Ditch	05090103-040-050	NO OmB, MoC2	0.483	0.483	29	Category 1	NO	Palustrine - Emergent Wetland Persistent (Choose Additional) (Choose Additional)	Seasonally Flooded
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :	Wetland 26 is located along the toe of slope and extends up small topographical valleys that direct sheet flow from the surrounding area to the wetland. Wetland 26 generally flows to the south and eventually east as it discharges, via sheet flow, into RR Ditch. RR Ditch -> Stream 22a/b -> Little Scioto River -> Ohio River.											

WETLAND TABLE : RESOURCES IDENTIFIED ON FIGURE(S) 11 & 12												
Wetland Name/I.D.:	**Photograph #(s):**	**Hydrologic Connection:**	**Receiving Waters (if non-isolated):**	**14-Digit HUC Boundary the Wetland is Located within:**	**Located Within a Mapped Hydric Soil Unit(s):**	**Approximate Total Size (Ac.):**	**Wetland Area Located within the Project Area (Ac.):**	**ORAM Assessment Score:**	**Provisional Wetland Category (based on ORAM):**	**Known High Quality Wetland (from Natural Heritage Database):**	**Dominant Wetland Community(ies) Based on Cowardin (1979) Wetland Classifications:**	**Estimated Hydroperiod (Cowardin, 1979)**
Wetland 28	72	Abutting	Pond 8	05090103-040-050	NO SfE, OmB, SbD	0.101	0.101	34	Modified Category 2	NO	Palustrine - Emergent Wetland Nonpersistent (Choose Additional) (Choose Additional)	Intermittently Exposed
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :			Wetland 28 is located around the fringe of Pond 8. Pond 8 is connected to Stream 22a/b via a drainage structure and sheet flow. Wetland 28 -> Stream 22a/b -> Little Scioto River -> Ohio River.									
Wetland 29	100	Abutting	Stream 18b	05090103-040-030	NO DoA	0.029	0.001	12.5	Category 1	NO	Palustrine - Emergent Wetland Persistent (Choose Additional) (Choose Additional)	Seasonally Flooded
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :			Wetland 28 -> Stream 18b -> Stream 18 (Long Run) -> Rocky Fork -> Little Scioto River -> Ohio River.									
Wetland 30	106	Adjacent	Stream 20	05090103-040-030	NO SfE	0.011	0.011	12.5	Category 1	NO	Palustrine - Emergent Wetland Persistent (Choose Additional) (Choose Additional)	Seasonally Flooded
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :			Wetland 30 is located upslope of Stream 20 and is hydrologically connected to Stream 20 via sheet flow. Wetland 30 -> Stream 20 -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.									
Wetland 31	108	Adjacent	Stream 20	05090103-040-030	NO SfE	0.027	0.027	12.5	Category 1	NO	Palustrine - Emergent Wetland Persistent (Choose Additional) (Choose Additional)	Seasonally Flooded
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :			Wetland 31 is located upslope of Stream 20 and is hydrologically connected to Stream 20 via sheet flow. Wetland 31 -> Stream 20 -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.									
Wetland 32	137	Abutting	Stream 17a/b	05090103-040-030	NO MoC2	0.049	0.019	53	Category 2	NO	Riverine - Emergent Wetland Nonpersistent (Choose Additional) (Choose Additional)	Seasonally Flooded
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :			Wetland 32 abuts Stream 17a/b. Wetland 32 -> Stream 17a/b -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.									
Wetland 33	104	Adjacent	Pond 5	05090103-040-030	NO SfE	0.021	0.021	26	Category 1	NO	Palustrine - Emergent Wetland Persistent (Choose Additional) (Choose Additional)	Intermittently Exposed
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :			Wetland 33 is associated with the wetland fringe around Pond 5. Stream 20 -> Stream 18 (Long Run) -> Rocky Fork -> Little Scioto River -> Ohio River.									

WETLAND TABLE : RESOURCES IDENTIFIED ON FIGURE(S) 11 & 12												
Wetland Name/I.D.:	**Photograph #(s):**	**Hydrologic Connection:**	**Receiving Waters (if non-isolated):**	**14-Digit HUC Boundary the Wetland is Located within:**	**Located Within a Mapped Hydric Soil Unit(s):**	**Approximate Total Size (Ac.):**	**Wetland Area Located within the Project Area (Ac.):**	**ORAM Assessment Score:**	**Provisional Wetland Category (based on ORAM):**	**Known High Quality Wetland (from Natural Heritage Database):**	**Dominant Wetland Community(ies) Based on Cowardin (1979) Wetland Classifications:**	**Estimated Hydroperiod (Cowardin, 1979)**
Wetland 34	157	Adjacent	Stream 19	05090103-040-030	NO OmB	0.013	0.013	13	Category 1	NO	Palustrine - Emergent Wetland Persistent (Choose Additional) (Choose Additional)	Seasonally Flooded
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :			Wetland 34 is adjacent to Stream 19. Wetland 34 -> Stream 19 -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.									
Wetland 35	158	Abutting	Stream 18-2-1	05090103-040-030	NO OmC	0.092	0.00	37	Modified Category 2	NO	Palustrine - Emergent Wetland Persistent (Choose Additional) (Choose Additional)	Seasonally Flooded
Additional Information. List How the wetland connects to a Traditional Navigable Water (TNW) if non-isolated, dominant plant species, and any other pertinent observations :			Wetland 35 abuts Stream 18-2-1. Wetland 35 -> Stream 18-2-1 -> Stream 18-2 -> Long Run -> Rocky Fork -> Little Scioto River -> Ohio River.									

POTENTIALLY JURISDICTIONAL DITCH TABLE : RESOURCES IDENTIFIED ON FIGURE(S) 11

(Warning: ditches that acquire/possess an **ordinary high water mark** and become **relatively permanent waters** outside of right-of-way (upstream) should be assessed as streams and included on the **Stream Table)**

Ditch I.D.:	Photograph #(s):	Receiving Waters:	14-Digit HUC Boundary the Ditch is Located within:	USACE Flow Characteristics:	OHWM Present:	Constructed Through or Drains a wetland:	Constructed Through a Mapped Hydric Soil Unit(s):	Flows Between Two or More Potential Waters of the US:	Average Width of Wetted Perimeter Within Project Area (ft.)	Total Length Within Project Area (lin. ft.):
Railroad Ditch 1	120	Stream 22a/b	05090103-040-030	Relatively Permanent Water-Seasonal	YES	NO	NO ScF	YES	4	89
Additional Information. List How the ditch connects to a Traditional Navigable Water (TNW) and any other pertinent observations :	The USGS map (Figure 1) of the project area does not have any blue lines along the railroad tracks within the project area and the map also indicates that those streams that do enter Railroad Ditch 1 do so north of the project area and flow north. Field observations revealed that Railroad Ditch 1 flows to the south and does not appear to capture any regulated channels. It is likely that Pond 7 eventually discharges into the railroad ditch via drainage tiles, however no surface connection between Pond 7 and Railroad Ditch 1 was observed during the field investigation. Railroad Ditch 1 -> Stream 22a/b -> Little Scioto River -> Ohio River.									
Railroad Ditch 2	119	Stream 22a/b	05090103-040-030	Relatively Permanent Water-Seasonal	YES	NO	NO ScF	YES	3	89
Additional Information. List How the ditch connects to a Traditional Navigable Water (TNW) and any other pertinent observations :	The USGS map (Figure 1) of the project area does not have any blue lines along the railroad tracks within the project area and the map also indicates that no streams discharge into Railroad Ditch 2. Field observations revealed that Railroad Ditch 2 flows to the south and does not appear to capture any regulated channels. Railroad Ditch 2 -> Stream 22a/b -> Little Scioto River -> Ohio River.									

POND, LAKE, RESERVOIR TABLE : RESOURCES IDENTIFIED ON FIGURE(S) 11										
Pond I.D.	**Photograph #(s):**	**Receiving Waters**	**14-Digit HUC Boundary the Water body is Located within:**	**Hydrologic Connection:**	**Type**	**Function**	**Functioning as Intended?**	**Located Within a Mapped Hydric Soil Unit(s):**	**Approximate Total Size (Ac.):**	**Pond Area Located within the Project Area (Ac.):**
Pond 4	92-94	Stream 18b to Long Run	05090103-040-030	Non-Isolated	Constructed	Agriculture (Stock Watering, Irrigation, Etc...)	YES	NO ErD, OmB	1.43	1.43
Additional Information. List How the water body connects to a Traditional Navigable Water (TNW) and any other pertinent observations :	Pond 4 is an impounded portion of Stream 18b. Pond 4 -> Stream 18b -> Stream 18 (Long Run) -> Rocky Fork -> Little Scioto River -> Ohio River.									
Pond 5	104, 105	Stream 20 to Long Run	05090103-040-030	Non-Isolated	Constructed	Agriculture (Stock Watering, Irrigation, Etc...)	NO	NO SfE	0.03	0.03
Additional Information. List How the water body connects to a Traditional Navigable Water (TNW) and any other pertinent observations :	Pond 5 is an impounded portion of Stream 20-2. Berm of pond has been breached since the original ESR. Still functions as a pond, although much shallower than before. Pond 5 -> Stream 20 -> Stream 18 (Long Run) -> Rocky Fork -> Little Scioto River -> Ohio River.									
Pond 6	52	Stream 21a to Long Run	05090103-040-030	Non-Isolated	Constructed	Agriculture (Stock Watering, Irrigation, Etc...)	YES	NO OmB	0.19	0.19
Additional Information. List How the water body connects to a Traditional Navigable Water (TNW) and any other pertinent observations :	Pond 6 is an impounded portion of Stream 21a. Pond 6 -> Wetland 18/W9WL2 -> Stream 21a -> RR Ditch 1 -> Stream 18 (Long Run) -> Rocky Fork -> Little Scioto River -> Ohio River.									
Pond 7	62	Outlet tiles to RR Ditch to Long Run	05090103-040-030	Non-Isolated	Constructed	Agriculture (Stock Watering, Irrigation, Etc...)	YES	NO MoC2	0.59	0.59
Additional Information. List How the water body connects to a Traditional Navigable Water (TNW) and any other pertinent observations :	Pond 7 outlets into a structure located at the southeast corner of the pond. This structure appears to outlet into farm drainage tiles and eventually discharges into RR Ditch 1. Pond 7 ->Railroad Ditch 1 -> Stream 22a/b -> Little Scioto River -> Ohio River.									
Pond 8	72	Outlet via drainage tile to Stream 22a/b to Little Scioto River	05090103-040-050	Non-Isolated	Constructed	Aesthetics	YES	NO SfE, OmB, SbD	0.47	0.47
Additional Information. List How the water body connects to a Traditional Navigable Water (TNW) and any other pertinent observations :	Pond 8 is hydrologically connected to Stream 22a/b via an outlet structure and sheet flow. Pond 8 -> Stream 22a/b -> Little Scioto River -> Ohio River.									

FISH TABLE (Species Characteristics from OEPA, 2008a)								
Scientific Name	**Common Name**	**Feeding Guild:**	**Breeding Guild:**	**Pollution Tolerance:**	**Federally Listed:**	**State Listed:**	**Declining Species (OAC 3745-1-05, Table 5-2):**	**Observed in Stream(s) (Include Quantity) :**
Rhinichthys obtusus	Western Blacknose Dace	Generalized Insectivore (G)	Simple Lithophil (S)	Tolerant (T)	Not Listed	Not Listed	NO	Stream 22a/b
Semotilus atromaculatus	Creek Chub	Generalized Insectivore (G)	Complex, No Parental Care (N)	Tolerant (T)	Not Listed	Not Listed	NO	Streams 17a/b, 18, 20
Etheostoma nigrum	Johnny Darter	Insectivore (I)	Complex, Parental Care (C)	Intermediate Tolerance (Blank Code)	Not Listed	Not Listed	NO	Streams 18, 20

General Fish Community Observations:

No formal fish sampling was completed during the ecological survey. Species identified were casually observed while conducting QHEI and HHEI evaluations of the streams.

AQUATIC MACROINVERTEBRATE TABLE	
Taxa Observed	**Observed in Stream(s) (Include Quantity) :**

Additional Aquatic Macroinvertebrate Community Observations:

No formal aquatic macroinvertebrate sampling was completed during the ecological survey. Species identified were casually observed while conducting QHEI and HHEI evaluations of the streams and are noted on the QHEI and HHEI data forms.

Terrestrial Ecology

VEGETATIVE COMMUNITIES	
List the number of distinct vegetative communities identified within the project area	10
Were any unique or high quality terrestrial habitats identified within the project area?	**NO**

TERRESTRIAL WILDLIFE	
Were any mammals observed within the project area? (If NO, delete the **Mammal Table**)	**YES**
If yes, total number of species identified:	8
Were any birds observed within the project area? (If NO, delete the **Bird Table**)	**YES**
If yes, total number of bird species identified:	34
Were any reptiles observed within the project area? (If NO, delete the **Reptile Table**)	**YES**
If yes, total number of reptile species identified:	4
Were any amphibian communities sampled/observed within the project area? (If NO, delete the **Amphibian Table**)	**YES**
If yes, total number of amphibian species identified:	6

Vegetative Communities and Land Cover Table : Vegetation and Land Cover Areas Identified on Figure(s) 10			
Vegetative Communities and Land Cover found within the project area:	**Degree of Man Induced Ecological Disturbance (based on descriptions in Andreas et. al., 2004)**	**Unique, Rare, or High Quality?**	**Acres**
Barren Land – BL - (Rock/Sand/Clay) - Barren areas of bedrock, slides, sand dunes, strip mines, gravel pits and other accumulations of earthen material. Generally, vegetation accounts for less than 15% of total cover.	Extreme Disturbance/Ruderal Community (dominated by opportunistic invaders or native highly tolerant taxa)	NO	23.93
Community Description (list dominant species, include Anderson (1982) community classification if applicable):	This area was recently clear-cut and consisted of logging slash and disturbed soils with some exposed rocky areas. Commonly encountered species within this community included *Acer saccharum*, *Rubus allegheniensis*, *Rosa multiflora, Smilax rotundifolia,*and *Lonicera japonica.* This area would have likely been considered an Oak-Maple-Tuliptree Forest as described by Anderson (1982), prior to clear cutting activities.		
Cultivated Crops - CC - (annual crops, all land being actively tilled, and perennial woody crops such as orchards and vineyards)	Extreme Disturbance/Ruderal Community (dominated by opportunistic invaders or native highly tolerant taxa)	NO	12.77
Community Description (list dominant species, include Anderson (1982) community classification if applicable):	Active agricultural field currently planted in soybeans and corn. Anderson (1982) community types do not apply.		
Developed Open Space - DS - (mown right-of-way, large-lot single-family housing units, parks, golf courses, and vegetation planted in developed settings for recreation, erosion control, or aesthetic purposes)	High Disturbance (dominated by widespread taxa not typical of a particular community)	NO	19.07
Community Description (list dominant species, include Anderson (1982) community classification if applicable):	This area consists of road right-of-way and maintained lawns. Anderson (1982) community types do not apply. Typical vegetation included *Poa pratensis* and *Festuca elatior*.		
Grassland/Herbaceous – GH - (new fields, pastures, hay fields)	High Disturbance (dominated by widespread taxa not typical of a particular community)	NO	112.68
Community Description (list dominant species, include Anderson (1982) community classification if applicable):	These areas consist of former agricultural fields and pastures that have been abandoned and are no longer maintained or grazed as evidenced by the presence of early successional pioneer species. Typical species encountered in this community includes *Festuca elatior*, *Poa pratensis*, *Asclepias hirtella, Vernonia gigantea, Schizachyrium scoparium,* and *Solidago canadensis.* Due to the high level of past disturbances, Anderson (1982) community types do not apply.		
Open Water - All areas of open water, generally with less than 25% cover of vegetation or soil.	High Disturbance (dominated by widespread taxa not typical of a particular community)	NO	2.74
Community Description (list dominant species, include Anderson (1982) community classification if applicable):	These areas consist of farm ponds created by impoundments and excavation. Anderson (1982) communities do not apply.		
Pasture/Hay (PH1) - Areas of grasses, legumes, or grass-legume mixtures planted for livestock grazing or the production of seed or hay crops, typically on a perennial cycle. Pasture/hay vegetation accounts for greater than 20 % of total vegetation.	Extreme Disturbance/Ruderal Community (dominated by opportunistic invaders or native highly tolerant taxa)	NO	25.01

Vegetative Communities and Land Cover Table : Vegetation and Land Cover Areas Identified on Figure(s) 10			
Vegetative Communities and Land Cover found within the project area:	**Degree of Man Induced Ecological Disturbance (based on descriptions in Andreas et. al., 2004)**	**Unique, Rare, or High Quality?**	**Acres**
Community Description (list dominant species, include Anderson (1982) community classification if applicable):	This community type is used exclusively for grazing cattle. Typical species present within this community includes *Festuca elatior*, *Poa pratensis*, *Dactylis glomerata, Trifolium repens, Trifolium pretense,* and *Trifolium campestre.* Anderson (1982) communities do not apply.		
Pasture/Hay (PH2) - Areas of grasses, legumes, or grass-legume mixtures planted for livestock grazing or the production of seed or hay crops, typically on a perennial cycle. Pasture/hay vegetation accounts for greater than 20 % of total vegetation.	High Disturbance (dominated by widespread taxa not typical of a particular community)	NO	5.16
Community Description (list dominant species, include Anderson (1982) community classification if applicable):	These areas are fenced off and appear to be used for occasional cattle grazing. Typical species present within this community includes *Festuca elatior*, *Poa pratensis*, *Dactylis glomerata,* and *Vernonia gigantea*. Anderson (1982) communities do not apply.		
Upland Forest – UF1 - (uplands dominated by trees)	High Disturbance (dominated by widespread taxa not typical of a particular community)	NO	103.81
Community Description (list dominant species, include Anderson (1982) community classification if applicable):	These areas have been clear cut and are in a more advanced stage of ecological succession. Some of these areas are also used for grazing livestock. These areas generally have low species diversity in the understory and generally have a mature overstory. Typical species include *Quercus* sp., *Acer saccharum*, *Rosa multiflora*, *Acer rubrum*, *Smilax rotundifolia,*and *Lonicera japonica*. These areas would be considered Oak-Maple-Tuliptree Forests as described by Anderson (1982).		
Upland Forest – UF2 - (uplands dominated by trees)	Low Disturbance (dominated by plants with a narrow range of ecological tolerances that typify a stable or near "climax" community)	NO	19.47
Community Description (list dominant species, include Anderson (1982) community classification if applicable):	These areas are generally mature second growth forest that do not exhibit any recent logging activity or appear to be grazed by livestock. These areas exhibit a well established and diverse understory consisting of graminoids, pteridophytes, and forbs. Typically encountered species in this community include *Acer saccharum*, *Quercus prinus*, *Liriodendron tulipifera, Quercus alba, Quercus rubra, Quercus coccinea,and Carya glabra.* These areas would be considered Oak-Maple-Tuliptree Forests as described by Anderson (1982).		
Scrub/Shrub - SS - (true shrubs, and young trees in an early successional stage)	High Disturbance (dominated by widespread taxa not typical of a particular community)	NO	3.46
Community Description (list dominant species, include Anderson (1982) community classification if applicable):	These areas are pasture/hay or grassland/herbaceous habitat areas that exhibit species commonly associated with the early stages of ecological succession. Typical species indentified within these areas include *Vernonia gigantea, Rubus allegheniensis, Rosa multiflora, Lonicera japonica, and Solidago canadensis.* Due to the historic man-induced disturbance of these areas, Anderson (1982) community types do not apply.		

VEGETATION TABLE						
Scientific Name:	**Common Name:**	**C of C:**	**Indicator Status:**	**Federally Listed:**	**State Listed:**	**Location (use vegetative community codes):**
Acer negundo	BOX ELDER	3	FAC+	No	No	PH, GH, UF
Acer rubrum	RED MAPLE	2	FAC	No	No	UF, PH, GH, BL
Acer saccharinum	SILVER MAPLE	3	FACW	No	No	UF, PH, GH, BL
Acer saccharum	SUGAR MAPLE	5	FACU-	No	No	UF, BL
Achillea millefolium	YARROW	1	FACU	No	No	PH, GH, DS, BL
Aconitum uncinatum	SOUTHERN MONKSHOOD	10	FAC+	No	Yes	UF
Actaea alba	WHITE BANEBERRY	7	UPL	No	No	UF
Adiantum pedatum	MAIDENHAIR FERN	6	FAC-	No	No	UF
Agalinis tenuifolia	SLENDER FOXGLOVE	4	FAC	No	No	PH, GH
Agrimonia gryposepala	TALL AGRIMONY	3	FACU	No	No	UF
Agrimonia parviflora	SMALL-FLOWERED AGRIMONY	2	FAC	No	No	PH, GH
AGROSTIS GIGANTEA	REDTOP	0	FACW	No	No	GH, PH, DS
AGROSTIS STOLONIFERA	CREEPING BENT GRASS	0	FACW	No	No	PH, GH
AILANTHUS ALTISSIMA	TREE-OF-HEAVEN	0	FACU-	No	No	UF
Alisma subcordatum	SOUTHERN WATER-PLANTAIN	2	OBL	No	No	PH, GH
ALLIARIA PETIOLATA	GARLIC MUSTARD	0	FACU-	No	No	UF
ALLIUM VINEALE	FIELD GARLIC	0	FACU-	No	No	DS, PH, GH
ALOPECURUS PRATENSIS	MEADOW FOXTAIL	0	FACW	No	No	PH, GH
AMARANTHUS RETROFLEXUS	REDROOT	0	FACU	No	No	GH, PH
Ambrosia artemisiifolia	COMMON RAGWEED	0	FACU	No	No	GH, PH, BL, DS
Amelanchier arborea	DOWNY SERVICEBERRY	5	FAC-	No	No	UF
Amphicarpaea bracteata	HOG-PEANUT	4	FAC	No	No	UF
Andropogon virginicus	COMMON BROOM-SEDGE	3	FACU	No	No	PH, GH
Anemone virginiana	WOODLAND THIMBLEWEED	3	FACU	No	No	UF
Antennaria plantaginifolia	PLANTAIN-LEAVED PUSSY-TOES	1	UPL	No	No	UF
ANTHOXANTHUM ODORATUM	SWEET VERNAL GRASS	0	FACU	No	No	PH, GH
Apocynum cannabinum	INDIAN HEMP	1	FACU	No	No	PH, GH
Aralia spinosa	DEVIL'S WALKINGSTICK	5	FAC	No	No	BL
ARCTIUM MINUS	COMMON BURDOCK	0	FACU-	No	No	GH, PH, UF
Arisaema dracontium	GREEN DRAGON	5	FACW	No	No	UF
Arisaema triphyllum subsp. triphyllum	JACK-IN-THE-PULPIT	3	FACU-	No	No	UF
Aruncus dioicus	GOAT'S-BEARD	6	FACU	No	No	UF
Asarum canadense	WILD GINGER	6	FACU-	No	No	UF
Asclepias hirtella	SAND MILKWEED	8	UPL	No	No	PH, GH
Asclepias syriaca	COMMON MILKWEED	1	FACU-	No	No	GH, PH, DS
Asclepias tuberosa	BUTTERFLY-WEED	4	UPL	No	No	PH, GH
Asimina triloba	PAWPAW	6	FACU+	No	No	UF
Asplenium platyneuron	EBONY SPLEENWORT	3	FACU	No	No	UF
Aster cordifolius	BLUE WOOD ASTER	4	UPL	No	No	UF
Aster divaricatus	WHITE WOOD ASTER	5	UPL	No	No	UF
Aster lateriflorus	CALICO ASTER	2	FACW-	No	No	UF
Aster novae-angliae	NEW ENGLAND ASTER	2	FACW-	No	No	PH, GH
Aster pilosus	AWL ASTER	1	UPL	No	No	PH, GH
Aster prenanthoides	ZIGZAG ASTER	4	FAC	No	No	UF
Aster sagittifolius	ARROW-LEAVED ASTER	3	UPL	No	No	UF
Aster schreberi	LARGE-LEAVED ASTER	5	FACU+	No	No	UF
Athyrium filix-femina	LADY FERN	5	FAC	No	No	UF
Athyrium pycnocarpon	NARROW-LEAVED GLADE FERN	8	FAC	No	No	UF
Athyrium thelypteroides	SILVERY GLADE FERN	6	FAC	No	No	UF
BARBAREA VULGARIS	YELLOW ROCKET	0	FACU	No	No	PH, GH, DS
BERBERIS THUNBERGII	JAPANESE BARBERRY	0	FACU	No	No	UF
Betula nigra	RIVER BIRCH	9	FACW	No	No	UF
Bidens frondosa	DEVIL'S BEGGAR'S-TICK	2	FACW	No	No	PH, GH, UF
BIDENS POLYLEPIS	OZARK TICKSEED-SUNFLOWER	0	FACW	No	No	PH, GH
Boehmeria cylindrica	FALSE NETTLE	4	FACW+	No	No	PH, GH, UF
Botrychium virginianum	RATTLESNAKE FERN	4	FACU	No	No	UF
Brachyelytrum erectum	LONG-AWNED WOOD GRASS	5	UPL	No	No	UF
BROMUS COMMUTATUS	HAIRY CHESS	0	UPL	No	No	PH, GH, DS
BROMUS INERMIS	HUNGARIAN BROME	0	UPL	No	No	PH, GH, DS
Bromus pubescens	CANADA BROME	4	FACU	No	No	UF
Cacalia atriplicifolia	PALE INDIAN-PLANTAIN	6	UPL	No	No	UF
Calystegia sepium	HEDGE BINDWEED	1	FAC-	No	No	PH, GH, UF
Campanula americana	TALL BELLFLOWER	4	FAC	No	No	UF
Campsis radicans	TRUMPET-CREEPER	1	FAC	No	No	PH, GH, DS
CARDUUS NUTANS	NODDING THISTLE	0	UPL	No	No	GH, PH
Carex albicans var. albicans	OAK SEDGE	4	UPL	No	No	UF
Carex albursina	WING-STEMMED WOOD SEDGE	6	UPL	No	No	UF
Carex blanda	COMMON WOOD SEDGE	1	FAC	No	No	UF
Carex communis	BEECH SEDGE	4	UPL	No	No	UF

VEGETATION TABLE						
Scientific Name:	**Common Name:**	**C of C:**	**Indicator Status:**	**Federally Listed:**	**State Listed:**	**Location (use vegetative community codes):**
Carex cristatella	CRESTED SEDGE	3	FACW	No	No	PH, GH
Carex digitalis	SLENDER WOOD SEDGE	4	UPL	No	No	UF
Carex frankii	FRANK'S SEDGE	2	OBL	No	No	PH, GH, DS
Carex glaucodea	BLUE-GREEN SEDGE	5	FAC	No	No	PH, GH, UF
Carex gracilescens	SLENDER WOOD SEDGE	3	UPL	No	No	UF
Carex hirsutella	HIRSUTE SEDGE	2	FACU	No	No	GH, PH
Carex hirtifolia	HAIRY-LEAVED SEDGE	3	UPL	No	No	UF
Carex laxiculmis	SPREADING SEDGE	3	UPL	No	No	UF
Carex laxiflora	TWO-EDGED WOOD SEDGE	3	FACU	No	No	UF
Carex lurida	BOTTLEBRUSH SEDGE	3	OBL	No	No	GH, PH, UF
Carex pensylvanica	PENNSYLVANIA SEDGE	3	UPL	No	No	UF
Carex platyphylla	BROAD-LEAVED WOOD SEDGE	6	UPL	No	No	UF
Carex radiata	RADIATE SEDGE	6	FAC	No	No	UF
Carex rosea	ROSE SEDGE	3	UPL	No	No	UF
Carex squarrosa	SQUARROSE SEDGE	4	FACW	No	No	PH, GH
Carex stipata	CROWDED SEDGE	2	OBL	No	No	PH, GH
Carex swanii	SWAN'S SEDGE	4	FACU	No	No	UF
Carex tribuloides	BLUNT BROOM SEDGE	4	FACW+	No	No	PH, GH
Carex virescens	GREENISH SEDGE	6	FACU	No	No	UF
Carex vulpinoidea	FOX SEDGE	1	OBL	No	No	PH, GH
Carex willdenowii	WILLDENOW'S SEDGE	6	UPL	No	No	UF
Carex woodii	WOOD'S SEDGE	7	UPL	No	No	UF
Carya cordiformis	BITTERNUT HICKORY	5	FACU+	No	No	UF
Carya glabra	PIGNUT HICKORY	5	FACU-	No	No	UF
Carya ovata	SHAGBARK HICKORY	6	FACU-	No	No	UF
Castanea dentata	AMERICAN CHESTNUT	6	UPL	No	Yes	UF
CELASTRUS ORBICULATUS	ORIENTAL BITTERSWEET	0	FACU	No	No	UF
Celtis occidentalis	HACKBERRY	4	FACU	No	No	UF
Cercis canadensis	REDBUD	3	FACU-	No	No	UF
Chamaecrista nictitans	WILD SENSITIVE PLANT	4	FACU-	No	No	PH, GH, UF
Chasmanthium latifolium	WILD RIVER OATS	7	FACU	No	No	UF
CHRYSANTHEMUM LEUCANTHEMUM	OX-EYE DAISY	0	UPL	No	No	GH, PH
CICHORIUM INTYBUS	CHICORY	0	UPL	No	No	DS
Cimicifuga racemosa	BLACK SNAKEROOT	7	FACU	No	No	UF
Circaea lutetiana	ENCHANTER'S-NIGHTSHADE	3	FACU	No	No	UF
CIRSIUM ARVENSE	CANADA THISTLE	0	FACU	No	No	DS, PH, GH
Cirsium discolor	FIELD THISTLE	4	UPL	No	No	DS, PH, GH
CIRSIUM VULGARE	BULL THISTLE	0	FACU-	No	No	PH, GH
Clematis virginiana	VIRGIN'S-BOWER	3	FAC	No	No	UF
Collinsonia canadensis	RICH WEED	5	FAC+	No	No	UF
COMMELINA COMMUNIS	COMMON DAY-FLOWER	0	FAC-	No	No	UF
CONIUM MACULATUM	POISON-HEMLOCK	0	FACW	No	No	PH, GH, DS, UF
Conopholis americana	SQUAWROOT	7	UPL	No	No	UF
Conyza canadensis	HORSEWEED	0	UPL	No	No	GH, PH, DS
Cornus florida	FLOWERING DOGWOOD	5	FACU-	No	No	UF, BL, PH, GH
Corylus americana	AMERICAN HAZEL	4	FACU-	No	No	UF
COTINUS COGGYGRIA	SMOKE-TREE	0	UPL	No	No	PH, GH
Cryptotaenia canadensis	HONEWORT	3	FAC	No	No	UF
Cunila origanoides	DITTANY	6	UPL	No	No	UF
Cyperus esculentus	YELLOW NUT-SEDGE	0	FACW	No	No	PH, GH
Cyperus strigosus	STRAW-COLORED UMBRELLA-SEDGE	1	FACW	No	No	PH, GH
DACTYLIS GLOMERATA	ORCHARD GRASS	0	FACU	No	No	GH, PH, DS, UF
Danthonia spicata	POVERTY OAT GRASS	4	UPL	No	No	GH, PH, UF, BL
Dasistoma macrophylla	MULLEIN-FOXGLOVE	5	FACU	No	No	UF
DAUCUS CAROTA	QUEEN-ANNE'S-LACE	0	UPL	No	No	BL, DS
Delphinium tricorne	DWARF LARKSPUR	4	UPL	No	No	UF
Desmodium nudiflorum	NAKED TICK-TREFOIL	5	UPL	No	No	GH, PH
Desmodium paniculatum	SHOWY TICK-TREFOIL	3	UPL	No	No	UF
DIANTHUS ARMERIA	DEPTFORD-PINK	0	UPL	No	No	PH, GH
Diarrhena americana	AMERICAN BEAK GRASS	7	FAC+	No	No	UF
DIGITARIA SANGUINALIS	NORTHERN CRAB GRASS	0	FACU-	No	No	GH, PH, DS
Diodia teres	ROUGH BUTTONWEED	3	UPL	No	No	GH, PH
DIOSCOREA BATATAS	CINNAMON-VINE	0	FACU	No	No	DS
Dioscorea quaternata	WHORLED-LEAVED YAM	5	FACU	No	No	UF
Diospyros virginiana	PERSIMMON	4	FAC-	No	No	PH, GH
Diphasiastrum digitatum	GROUND-PINE	1	FACU-	No	No	UF
DIPSACUS FULLONUM	WILD TEASEL	0	FACU-	No	No	PH, GH, DS

VEGETATION TABLE						
Scientific Name:	**Common Name:**	**C of C:**	**Indicator Status:**	**Federally Listed:**	**State Listed:**	**Location (use vegetative community codes):**
Dryopteris carthusiana	SPINULOSE WOOD FERN	5	FAC+	No	No	UF
Dryopteris intermedia	EVERGREEN WOOD FERN	6	FACU	No	No	UF
Dryopteris marginalis	MARGINAL WOOD FERN	5	FACU-	No	No	UF
ECHINOCHLOA CRUSGALLI	BARNYARD GRASS	0	FACU	No	No	GH, PH, DS
Eclipta prostrata	YERBA-DE-TAJO	3	FAC	No	No	PH, GH
ELAEAGNUS UMBELLATA	AUTUMN-OLIVE	0	FACU	No	No	PH, GH
Eleocharis erythropoda	RED-FOOTED SPIKE-RUSH	4	OBL	No	No	PH, GH
Eleocharis obtusa	BLUNT SPIKE-RUSH	1	OBL	No	No	GH, PH
ELEUSINE INDICA	GOOSE GRASS	0	FACU-	No	No	GH, PH
Elymus hystrix	BOTTLEBRUSH GRASS	4	UPL	No	No	UF
Elymus virginicus	VIRGINIA WILD RYE	3	FACW-	No	No	UF
ELYTRIGIA REPENS	QUACKGRASS	0	FACU-	No	No	GH, PH, DS, UF
Epilobium coloratum	PURPLE-LEAVED WILLOW-HERB	1	OBL	No	No	PH, GH
Equisetum arvense	FIELD HORSETAIL	0	FAC	No	No	UF, DS
Erechtites hieracifolia	PILEWORT	2	FACU	No	No	BL, PH, GH
Erigeron annuus	DAISY FLEABANE	0	FACU	No	No	GH, PH, UF
Erigeron philadelphicus	PHILADELPHIA FLEABANE	2	FACU	No	No	PH, GH, UF
Erigeron strigosus	ROUGH FLEABANE	1	FACU+	No	No	GH, PH, BL
Euonymus americanus	AMERICAN STRAWBERRY-BUSH	6	FAC	No	No	UF
Eupatorium coelestinum	MISTFLOWER	3	FAC	No	No	PH, GH
Eupatorium fistulosum	HOLLOW-STEMMED JOE-PYE W.	6	FACW	No	No	PH, GH
Eupatorium perfoliatum	COMMON BONESET	3	FACW+	No	No	PH, GH
Eupatorium rugosum	WHITE SNAKEROOT	3	FACU	No	No	UF
Eupatorium serotinum	LATE-FLOWERING BONESET	2	FAC-	No	No	PH, GH
Eupatorium sessilifolium	UPLAND BONESET	4	UPL	No	No	UF
Euthamia graminifolia	FLAT-TOPPED GOLDENROD	2	FAC	No	No	PH, GH
Fagus grandifolia	AMERICAN BEECH	7	FACU	No	No	UF
FESTUCA ELATIOR	TALL FESCUE	0	FACU	No	No	GH, PH, DS, UF
Fraxinus americana	WHITE ASH	6	FACU	No	No	UF, PH, GH
Fraxinus pennsylvanica	GREEN ASH	3	FACW	No	No	PH, GH
Galium aparine	CLEAVERS	0	FACU	No	No	PH, GH, UF
Galium circaezans	WILD LICORICE	4	UPL	No	No	UF
Galium concinnum	SHINING BEDSTRAW	5	UPL	No	No	UF
Galium lanceolatum	LANCE-LEAVED BEDSTRAW	5	UPL	No	No	UF
GALIUM MOLLUGO	WHITE BEDSTRAW	0	UPL	No	No	PH, GH, UF
Galium pilosum	HAIRY BEDSTRAW	4	UPL	No	No	UF, PH, GH
Galium tinctorium	SMALL THREE-LOBED BEDSTRAW	4	OBL	No	No	PH, GH
Galium triflorum	SWEET-SCENTED BEDSTRAW	4	FACU	No	No	UF
Gaylussacia baccata	HUCKLEBERRY	6	FACU	No	No	UF
Geranium maculatum	WILD GERANIUM	4	FACU	No	No	UF
Geum canadense	WHITE AVENS	2	FACU	No	No	UF
GLECHOMA HEDERACEA	GROUND IVY	0	FACU	No	No	UF, DS
Gleditsia triacanthos	HONEY LOCUST	4	FAC-	No	No	UF
Glyceria striata	FOWL MANNA GRASS	2	OBL	No	No	UF, PH, GH
Goodyera pubescens	DOWNY RATTLESNAKE-PLANTAIN	6	FACU-	No	No	UF
Hackelia virginiana	VIRGINIA STICKSEED	2	FACU	No	No	UF
Hamamelis virginiana	WITCH-HAZEL	5	FAC-	No	No	UF
Hedeoma pulegioides	AMERICAN PENNYROYAL	2	UPL	No	No	UF
HELENIUM FLEXUOSUM	NAKED SNEEZEWEED	0	FAC-	No	No	PH, GH
HEMEROCALLIS FULVA	ORANGE DAY-LILY	0	UPL	No	No	DS, PH, GH, UF
Hepatica acutiloba	SHARP-LOBED HEPATICA	5	UPL	No	No	UF
Heuchera americana	COMMON ALUM-ROOT	4	FACU-	No	No	UF
HOLCUS LANATUS	VELVET GRASS	0	FACU	No	No	PH, GH
Hydrangea arborescens	WILD HYDRANGEA	7	FACU	No	No	UF
Hypericum hypericoides	ST. ANDREW'S CROSS	6	UPL	No	No	UF
ILEX OPACA	AMERICAN HOLLY	0	FACU+	No	No	UF
Impatiens capensis	SPOTTED TOUCH-ME-NOT	2	FACW	No	No	UF, PH, GH
Ipomoea lacunosa	WHITE MORNING-GLORY	4	FACW	No	No	PH, GH
Iris cristata	DWARF CRESTED IRIS	5	UPL	No	No	UF
Juglans nigra	BLACK WALNUT	5	FACU	No	No	UF, PH, GH
Juncus acuminatus	SHARP-FRUITED RUSH	4	OBL	No	No	PH, GH
Juncus anthelatus	BRANCHED RUSH	4	FAC-	No	No	GH, PH
Juncus brachycarpus	SHORT-FRUITED RUSH	5	FACW	No	No	PH, GH
Juncus dudleyi	DUDLEY'S RUSH	3	FACW-	No	No	GH, PH
Juncus effusus	SOFT RUSH	1	FACW+	No	No	PH, GH
Juncus marginatus	GRASS-LEAVED RUSH	4	FACW	No	No	GH, PH
Juncus tenuis	PATH RUSH	1	FAC-	No	No	GH, PH, UF
Juniperus virginiana	EASTERN RED CEDAR	3	FACU	No	No	PH, GH
Krigia biflora	ORANGE DWARF-DANDELION	5	FACU	No	No	UF, PH, GH

VEGETATION TABLE						
Scientific Name:	**Common Name:**	**C of C:**	**Indicator Status:**	**Federally Listed:**	**State Listed:**	**Location (use vegetative community codes):**
Lactuca biennis	TALL BLUE LETTUCE	1	FACU	No	No	UF
Laportea canadensis	WOOD-NETTLE	5	FACW	No	No	UF
Leersia oryzoides	RICE CUT GRASS	1	OBL	No	No	PH, GH, UF
Leersia virginica	WHITE GRASS	4	FACW	No	No	UF
LEPIDIUM CAMPESTRE	FIELD PEPPER-GRASS	0	UPL	No	No	DS
LEPIDIUM DENSIFLORUM	PRAIRIE PEPPER-GRASS	0	FAC	No	No	GH, PH
LESPEDEZA CUNEATA	CHINESE BUSH-CLOVER	0	FACU-	No	No	PH, GH
Lespedeza repens	SMALL TRAILING BUSH-CLOVER	6	UPL	No	No	PH, GH
LESPEDEZA STIPULACEA	KOREAN-CLOVER	0	FACU	No	No	PH, GH
Lespedeza virginica	VIRGINIA BUSH-CLOVER	3	UPL	No	No	GH, PH
LINARIA VULGARIS	BUTTER-AND-EGGS	0	UPL	No	No	UF
Lindera benzoin	SPICEBUSH	5	FACW-	No	No	UF
Lindernia dubia	FALSE PIMPERNEL	2	OBL	No	No	PH, GH, UF
Liquidambar styraciflua	SWEETGUM	6	FAC	No	No	PH, GH
Liriodendron tulipifera	TULIP TREE	6	FACU	No	No	UF, PH, GH
Lobelia spicata	PALE-SPIKE LOBELIA	5	FAC-	No	No	GH, PH
LOLIUM PERENNE	PERENNIAL RYEGRASS	0	FACU-	No	No	GH, PH, DS
LONICERA JAPONICA	JAPANESE HONEYSUCKLE	0	FAC-	No	No	UF, BL, DS, PH, GH
LONICERA TATARICA	TATARIAN HONEYSUCKLE	0	FACU	No	No	DS, PH, GH, UF
Ludwigia alternifolia	SEEDBOX	3	FACW+	No	No	PH, GH
Ludwigia palustris	WATER-PURSLANE	3	OBL	No	No	PH, GH
Luzula acuminata	HAIRY WOODRUSH	6	FAC	No	No	UF
Luzula multiflora	COMMON WOODRUSH	3	FACU	No	No	UF
Lycopus americanus	AMERICAN WATER-HOREHOUND	3	OBL	No	No	PH, GH
Lycopus virginicus	VIRGINIA BUGLE-WEED	3	OBL	No	No	PH, GH
LYSIMACHIA NUMMULARIA	MONEYWORT	0	OBL	No	No	UF
Lysimachia quadrifolia	WHORLED LOOSESTRIFE	5	FACU-	No	No	UF
Maianthemum racemosum	FALSE SOLOMON'S-SEAL	4	FACU-	No	No	UF
MATRICARIA MATRICARIOIDES	PINEAPPLE-WEED	0	FACU	No	No	PH, GH
Medeola virginiana	INDIAN CUCUMBER-ROOT	6	UPL	No	No	UF
MEDICAGO LUPULINA	BLACK MEDICK	0	UPL	No	No	GH, PH, DS
MELILOTUS ALBA	WHITE SWEET-CLOVER	0	FACU-	No	No	DS, PH, GH
MELILOTUS OFFICINALIS	YELLOW SWEET-CLOVER	0	FACU-	No	No	PH, GH, DS
Mentha arvensis	FIELD MINT	2	FACW	No	No	PH, GH
MICROSTEGIUM VIMINEUM	RECLINING EULALIA	0	FAC	No	No	GH, PH, DS, UF
Mimulus ringens	COMMON MONKEY-FLOWER	4	OBL	No	No	PH, GH
Mitchella repens	PARTRIDGE-BERRY	5	FACU	No	No	UF
Monarda clinopodia	BASIL BEE-BALM	4	FAC+	No	No	UF
MORUS ALBA	WHITE MULBERRY	0	UPL	No	No	UF
Myosotis verna	SPRING FORGET-ME-NOT	4	FAC-	No	No	UF
Nyssa sylvatica	BLACK-GUM	7	FAC	No	No	UF
Obolaria virginica	PENNYWORT	7	UPL	No	No	UF
Onoclea sensibilis	SENSITIVE FERN	2	FACW	No	No	UF
Orbexilum onobrychis	SCURF-PEA	5	UPL	No	No	PH, GH
Orchis spectabilis	SHOWY ORCHIS	7	UPL	No	No	UF
Osmorhiza claytonii	WOOLLY SWEET CICELY	4	FACU-	No	No	UF
Osmunda claytoniana	INTERRUPTED FERN	6	FAC	No	No	UF
Ostrya virginiana	HOP-HORNBEAM	5	FACU-	No	No	UF
Oxalis grandis	GREAT YELLOW WOOD-SORREL	7	UPL	No	No	UF
Oxalis stricta	COMMON YELLOW WOOD-SORREL	0	UPL	No	No	UF, DS
Oxalis violacea	VIOLET WOOD-SORREL	6	UPL	No	No	UF
Oxydendron arboreum	SOURWOOD	7	UPL	No	No	UF
Panicum boscii	BOSC'S PANIC GRASS	6	UPL	No	No	UF
Panicum clandestinum	DEER'S-TONGUE PANIC GRASS	2	FAC+	No	No	UF, PH, GH
Panicum lanuginosum	WESTERN PANIC GRASS	3	FAC	No	No	PH, GH, UF
Panicum latifolium	BROAD-LEAVED PANIC GRASS	4	FACU-	No	No	UF
Panicum rigidulum	RIGID PANIC GRASS	5	FACW+	No	No	GH, PH
Parthenocissus quinquefolia	VIRGINIA CREEPER	2	FACU	No	No	UF, PH, GH, DS
PAULOWNIA TOMENTOSA	PRINCESS TREE	0	UPL	No	No	BL
Penstemon digitalis	FOXGLOVE BEARD-TONGUE	2	FAC	No	No	UF
Phalaris arundinacea	REED CANARY GRASS	0	FACW+	No	No	PH, GH, DS, UF
Phryma leptostachya	LOPSEED	5	FACU-	No	No	UF
Phytolacca americana	POKEWEED	1	FACU+	No	No	BL, UF
Pilea pumila	CLEARWEED	2	FACW	No	No	UF, PH, GH
Pinus echinata	SHORTLEAF PINE	8	UPL	No	No	UF
Pinus virginiana	VIRGINIA PINE	3	UPL	No	No	UF
PLANTAGO ARISTATA	BRACTED PLANTAIN	0	UPL	No	No	GH, PH
PLANTAGO LANCEOLATA	ENGLISH PLANTAIN	0	UPL	No	No	GH, PH, DS

VEGETATION TABLE						
Scientific Name:	**Common Name:**	**C of C:**	**Indicator Status:**	**Federally Listed:**	**State Listed:**	**Location (use vegetative community codes):**
Plantago rugelii	RUGEL'S PLANTAIN	0	FACU	No	No	GH, PH, DS
Platanthera lacera	RAGGED FRINGED ORCHID	3	FACW	No	No	PH, GH
Platanus occidentalis	SYCAMORE	7	FACW-	No	No	UF, PH, GH
POA COMPRESSA	CANADA BLUEGRASS	0	FACU	No	No	UF, PH, GH
POA PRATENSIS	KENTUCKY BLUEGRASS	0	FACU	No	No	GH, PH, DS
POA TRIVIALIS	ROUGH BLUEGRASS	0	FACW	No	No	PH, GH
Podophyllum peltatum	MAYAPPLE	4	FACU	No	No	UF
Polemonium reptans	SPREADING JACOB'S LADDER	5	FACU	No	No	UF
Polygala sanguinea	FIELD MILKWORT	2	FACU	No	No	PH, GH
Polygonatum biflorum	SMOOTH SOLOMON'S-SEAL	4	FACU	No	No	UF
POLYGONUM ARENASTRUM	DOORYARD KNOTWEED	0	[UPL]	No	No	UF
POLYGONUM CESPITOSUM	LONG-BRISTLED SMARTWEED	0	FACU-	No	No	GH, PH, UF
POLYGONUM CUSPIDATUM	JAPANESE KNOTWEED	0	FACU-	No	No	GH, PH
Polygonum hydropiper	WATER-PEPPER	1	OBL	No	No	PH, GH
POLYGONUM PERSICARIA	LADY'S THUMB	0	FACW	No	No	PH, GH
Polygonum sagittatum	ARROW-LEAVED TEARTHUMB	2	OBL	No	No	PH, GH
Polystichum acrostichoides	CHRISTMAS FERN	3	FACU-	No	No	UF
POPULUS ALBA	WHITE POPLAR	0	UPL	No	No	GH
Populus deltoides	EASTERN COTTONWOOD	3	FAC	No	No	UF, PH, GH
Populus grandidentata	BIG-TOOTH ASPEN	2	FACU-	No	No	UF
Porteranthus stipulatus	AMERICAN IPECAC	6	UPL	No	No	UF
Potamogeton epihydrus	RIBBON-LEAVED PONDWEED	6	OBL	No	No	PH, GH
Potentilla canadensis	RUNNING CINQUEFOIL	3	UPL	No	No	GH, PH
Potentilla simplex	OLD FIELD CINQUEFOIL	1	FACU-	No	No	PH, GH, UF
Prenanthes alba	WHITE RATTLESNAKE-ROOT	5	FACU	No	No	UF
Prenanthes altissima	TALL RATTLESNAKE-ROOT	4	FACU-	No	No	UF
Prenanthes serpentaria	LION'S FOOT	5	UPL	No	No	UF
Prosartes lanuginosa	YELLOW MANDARIN	7	UPL	No	No	UF
Prunella vulgaris	SELF-HEAL	0	FACU+	No	No	UF
Prunus serotina	BLACK CHERRY	3	FACU	No	No	UF, PH, GH
Prunus virginiana	CHOKE CHERRY	2	FACU	No	No	UF, PH, GH
Pycnanthemum pycnanthemoides	SOUTHERN MOUNTAIN-MINT	6	UPL	No	No	UF
Pycnanthemum tenuifolium	NARROW-LEAVED MOUNTAIN-MINT	4	FACW	No	No	PH, GH
PYRUS CALLIERYANA	CALLIERY PEAR	0	UPL	No	No	PH, GH
Quercus alba	WHITE OAK	6	FACU-	No	No	UF, BL
Quercus coccinea	SCARLET OAK	6	UPL	No	No	UF
Quercus imbricaria	SHINGLE OAK	5	FAC	No	No	UF
Quercus muehlenbergii	CHINQUAPIN OAK	7	UPL	No	No	UF
Quercus prinus	ROCK CHESTNUT OAK	7	UPL	No	No	UF, BL
Quercus rubra	RED OAK	6	FACU-	No	No	UF, BL
Quercus velutina	BLACK OAK	7	UPL	No	No	UF, BL
Rhus copallinum	WINGED SUMAC	4	FACU-	No	No	PH, GH
Rhus typhina	STAGHORN SUMAC	2	UPL	No	No	PH, GH, DS
ROBINIA HISPIDA	BRISTLY LOCUST	0	UPL	No	No	DS, PH, GH
Robinia pseudoacacia	BLACK LOCUST	0	FACU-	No	No	PH, GH, UF
RORIPPA SYLVESTRIS	CREEPING YELLOW CRESS	0	FACW	No	No	PH, GH
ROSA MULTIFLORA	MULTIFLORA ROSE	0	FACU	No	No	UF, PH, GH, DS, BL
Rubus allegheniensis	COMMON BLACKBERRY	1	FACU-	No	No	BL, DS
Rubus occidentalis	BLACK RASPBERRY	1	UPL	No	No	BL, UF
Rubus pensylvanicus	PENNSYLVANIA BLACKBERRY	1	FACU	No	No	UF, BL
Rudbeckia fulgida	ORANGE CONEFLOWER	6	FAC	No	No	UF
Rudbeckia hirta	BLACK-EYED SUSAN	1	FACU-	No	No	PH, GH
RUMEX CRISPUS	CURLY DOCK	0	FACU	No	No	PH, GH
RUMEX OBTUSIFOLIUS	BITTER DOCK	0	FACU-	No	No	PH, GH
Salix exigua	SANDBAR WILLOW	1	OBL	No	No	PH, GH
SALIX FRAGILIS	CRACK WILLOW	0	FAC+	No	No	PH, GH
Salix nigra	BLACK WILLOW	2	FACW+	No	No	PH, GH
Salvia lyrata	LYRE-LEAVED SAGE	3	UPL	No	No	PH, GH
Sambucus canadensis	COMMON ELDERBERRY	3	FACW-	No	No	PH, GH, DS
Sanguinaria canadensis	BLOODROOT	5	UPL	No	No	UF
Sanicula canadensis	SHORT-STYLED SNAKEROOT	3	UPL	No	No	UF
Sanicula gregaria	CLUSTERED SNAKEROOT	3	FACU	No	No	UF
Sanicula trifoliata	LARGE-FRUITED SNAKEROOT	3	UPL	No	No	UF
Sassafras albidum	SASSAFRAS	3	FACU-	No	No	UF, PH, GH
Schizachyrium scoparium	LITTLE BLUESTEM	5	FACU-	No	No	PH, GH
Scirpus atrovirens	GREEN BULRUSH	1	OBL	No	No	PH, GH
Scirpus hattorianus	SMOOTH-LVD. DARK GREEN BULR.	1	OBL	No	No	PH, GH, DS

VEGETATION TABLE						
Scientific Name:	**Common Name:**	**C of C:**	**Indicator Status:**	**Federally Listed:**	**State Listed:**	**Location (use vegetative community codes):**
Scutellaria elliptica	HAIRY SKULLCAP	5	UPL	No	No	UF
Scutellaria integrifolia	HYSSOP SKULLCAP	6	FACW	No	No	PH, GH
Senecio aureus	GOLDEN RAGWORT	4	FACW	No	No	UF
SENECIO GLABELLUS	BUTTERWEED	0	OBL	No	No	PH, GH
SIDA SPINOSA	PRICKLY SIDA	0	UPL	No	No	PH, GH
Sisyrinchium albidum	PALE BLUE-EYED-GRASS	6	FAC	No	No	PH, GH
Sisyrinchium angustifolium	STOUT BLUE-EYED-GRASS	2	FACW-	No	No	PH, GH
Smilax rotundifolia	COMMON GREENBRIER	4	FAC	No	No	UF, BL
SOLANUM CAROLINENSE	HORSE NETTLE	0	UPL	No	No	UF
Solidago caesia	BLUE-STEMMED GOLDENROD	5	FACU	No	No	UF
Solidago canadensis	CANADA GOLDENROD	1	FACU	No	No	GH, PH, DS, UF
Solidago flexicaulis	ZIGZAG GOLDENROD	5	FACU	No	No	UF
Solidago gigantea	SMOOTH GOLDENROD	3	FACW	No	No	PH, GH
Solidago juncea	PLUME GOLDENROD	2	UPL	No	No	PH, GH, UF
Solidago nemoralis	GRAY GOLDENROD	2	UPL	No	No	UF, PH, GH
SONCHUS ASPER	PRICKLY SOW-THISTLE	0	FAC	No	No	DS, PH, GH
Sorghastrum nutans	INDIAN GRASS	5	UPL	No	No	PH, GH
SORGHUM HALEPENSE	JOHNSON GRASS	0	FACU	No	No	PH, GH, DS
Stachys cordata	HEART-LEAVED HEDGE-NETTLE	4	FAC	No	No	UF
Stachys tenuifolia	SMOOTH HEDGE-NETTLE	4	FACW+	No	No	PH, GH
STELLARIA AQUATICA	WATER CHICKWEED	0	FACW	No	No	UF
STELLARIA MEDIA	COMMON CHICKWEED	0	UPL	No	No	PH, GH
Stellaria pubera	STAR CHICKWEED	5	UPL	No	No	UF, PH, GH
TARAXACUM OFFICINALE	COMMON DANDELION	0	FACU-	No	No	DS, PH, GH
Thalictrum dasycarpum	PURPLE MEADOW-RUE	4	FACW	No	No	UF
Thalictrum dioicum	EARLY MEADOW-RUE	5	FAC	No	No	UF
Thelypteris hexagonaptera	BROAD BEECH-FERN	7	FAC	No	No	UF
Thelypteris noveboracensis	NEW YORK FERN	4	FAC	No	No	UF
THLASPI ARVENSE	FIELD PENNY CRESS	0	UPL	No	No	PH, GH
Toxicodendron radicans	POISON-IVY	1	FAC	No	No	UF, PH, GH, BL, DS
Trichophorum planifolium	FLAT-LEAVED BULRUSH	7	UPL	No	No	UF
Tridens flavus	GREASE GRASS	1	FACU	No	No	GH, PH, DS
TRIFOLIUM CAMPESTRE	PINNATE HOP CLOVER	0	0	No	No	GH, PH, UF
TRIFOLIUM HYBRIDUM	ALSIKE CLOVER	0	FACU-	No	No	PH, GH
TRIFOLIUM PRATENSE	RED CLOVER	0	FACU-	No	No	GH, PH
TRIFOLIUM REPENS	WHITE CLOVER	0	FACU-	No	No	GH, PH
Trillium grandiflorum	LARGE-FLOWERED TRILLIUM	5	UPL	No	No	UF
Triodanis perfoliata	VENUS'-LOOKING-GLASS	2	FAC	No	No	BL
TUSSILAGO FARFARA	COLTSFOOT	0	FACU	No	No	UF
TYPHA ANGUSTIFOLIA	NARROW-LEAVED CAT-TAIL	0	OBL	No	No	PH, GH
Typha latifolia	BROAD-LEAVED CAT-TAIL	1	OBL	No	No	DS
Ulmus americana	AMERICAN ELM	2	FACW-	No	No	UF
Ulmus rubra	SLIPPERY ELM	3	FAC	No	No	PH, GH, DS
Urtica dioica var. procera	AMERICAN STINGING NETTLE	1	FAC-	No	No	UF
Uvularia grandiflora	LARGE-FLOWERED BELLWORT	5	UPL	No	No	UF
Vaccinium pallidum	LOW BLUEBERRY	6	UPL	No	No	UF
Vaccinium stamineum	DEERBERRY	6	FACU-	No	No	UF
Verbena urticifolia	WHITE VERVAIN	3	FACU	No	No	BL
Verbesina alternifolia	WINGSTEM	5	FAC	No	No	UF
Vernonia gigantea	TALL IRONWEED	2	FAC	No	No	GH, PH
VERONICA OFFICINALIS	COMMON SPEEDWELL	0	FACU-	No	No	UF
Viburnum acerifolium	MAPLE-LEAVED VIBURNUM	6	UPL	No	No	UF
Viburnum prunifolium	BLACK-HAW	4	FACU	No	No	UF
VICIA VILLOSA	HAIRY VETCH	0	UPL	No	No	GH, PH
Viola palmata var. palmata	PALMATE-LEAVED VIOLET	4	FACW	No	No	UF
Viola primulifolia	PRIMROSE-LEAVED VIOLET	8	FAC+	No	Yes	UF, PH, GH
Viola pubescens	DOWNY YELLOW VIOLET	4	FACU-	No	No	UF
Viola sororia	COMMON BLUE VIOLET	1	FAC-	No	No	UF, DS
Viola striata	STRIPED CREAMY VIOLET	5	FACW	No	No	UF
Vitis aestivalis	SUMMER GRAPE	4	FACU	No	No	UF
Vitis riparia	RIVERBANK GRAPE	3	FACW	No	No	UF, PH, GH, DS
Vitis vulpina	FROST GRAPE	3	FAC	No	No	UF
XANTHIUM STRUMARIUM	COMMON COCKLEBUR	0	FAC	No	No	PH, GH

MAMMAL TABLE				
Scientific Name	**Common Name**	**Federally Listed:**	**State Listed:**	**Location (use vegetative community codes):**
Blarina brevicauda	Shorttail Shrew	Not Listed	Not Listed	PH
Canis latrans	Coyote	Not Listed	Not Listed	PH, GH, UF
Didelphis marsupialis	Opossum	Not Listed	Not Listed	DS
Marmota monax	Woodchuck	Not Listed	Not Listed	PH, GH, CC
Odocoileus virginianus	Whitetail Deer	Not Listed	Not Listed	UF, PH, GH
Procyon lotor	Raccoon	Not Listed	Not Listed	PH, GH, UF
Sciurus griseus	Eastern Gray Squirrel	Not Listed	Not Listed	UF
Sylvilagus floridanus	Eastern Cottontail	Not Listed	Not Listed	PH, GH

Additional Mammal Observations:
All of the identified mammals are common throughout southern Ohio.

BIRD TABLE						
Scientific Name	**Common Name**	**Date of Observation**	**Typical Ohio Range**	**Federally Listed:**	**State Listed:**	**Location (use vegetative community codes):**
Agelaius phoeniceus	Red Winged Blackbird	6/28/2011	Year-Round Resident	Not Listed	Not Listed	DS, GH
Archilochus colubris	Ruby Throated Hummingbird	6/28/2011	Breeding Season Resident	Not Listed	Not Listed	GH
Ardea herodias	Great Blue Heron	6/23/2011	Year-Round Resident	Not Listed	Not Listed	PH
Baeolophus bicolor	Tufted Titmouse	6/14/2011	Year-Round Resident	Not Listed	Not Listed	UF
Buteo jamaicensis	Red Tailed Hawk	6/7/2011	Year-Round Resident	Not Listed	Not Listed	PH, GH, DS
Cardinalis cardinalis	Northern Cardinal	6/15/2011	Year-Round Resident	Not Listed	Not Listed	DS, UF
Cathartes aura	Turkey Vulture	6/15/2011	Year-Round Resident	Not Listed	Not Listed	PH, GH
Coccyzus erythropthalmus	Black Billed Cuckoo	6/22/2011	Breeding Season Resident	Not Listed	Not Listed	UF
Contopus virens	Eastern Wood Pewee	6/7/2011	Breeding Season Resident	Not Listed	Not Listed	UF
Corvus brachyrhynchos	American Crow	6/15/2011	Year-Round Resident	Not Listed	Not Listed	PH, GH, DS
Cyanocitta cristata	Bluejay	6/7/2011	Year-Round Resident	Not Listed	Not Listed	DS, GH, SS
Dryocopus pileatus	Pileated Woodpecker	6/22/2011	Year-Round Resident	Not Listed	Not Listed	UF
Dumetella carolinensis	Gray Catbird	6/7/2011	Breeding Season Resident	Not Listed	Not Listed	UF, PH, GH
Empidonax virescens	Acadian Flycatcher	6/7/2011	Breeding Season Resident	Not Listed	Not Listed	UF
Hirundo rustica	Barn Swallow	6/8/2011	Breeding Season Resident	Not Listed	Not Listed	GH, PH, DS
Hylocichla mustelina	Wood Thrush	6/28/2011	Breeding Season Resident	Not Listed	Not Listed	UF
Megaceryle alcyon	Belted Kingfisher	6/28/2011	Year-Round Resident	Not Listed	Not Listed	PH
Melanerpes erythrocephalus	Red-headed Woodpecker	6/15/2011	Year-Round Resident	Not Listed	Not Listed	UF
Meleagris gallopavo	Turkey	6/15/2011	Year-Round Resident	Not Listed	Not Listed	UF, GH

BIRD TABLE						
Scientific Name	**Common Name**	**Date of Observation**	**Typical Ohio Range**	**Federally Listed:**	**State Listed:**	**Location (use vegetative community codes):**
Melospiza melodia	Song Sparrow	6/22/2011	Year-Round Resident	Not Listed	Not Listed	PH, GH
Mimus polyglottos	Northern Mockingbird	6/8/2011	Year-Round Resident	Not Listed	Not Listed	PH, GH
Passerina cyanea	Indigo Bunting	6/28/2011	Breeding Season Resident	Not Listed	Not Listed	PH, GH
Picoides pubescens	Downy Woodpecker	6/7/2011	Year-Round Resident	Not Listed	Not Listed	UF
Pipilo erythrophthalmus	Eastern Towhee	6/15/2011	Year-Round Resident	Not Listed	Not Listed	UF, GH
Poecile carolinensis	Carolina Chickadee	6/7/2011	Year-Round Resident	Not Listed	Not Listed	UF
Scolopax minor	American Woodcock	6/28/2011	Breeding Season Resident	Not Listed	Not Listed	UF
Seiurus aurocapillus	Ovenbird	6/7/2011	Breeding Season Resident	Not Listed	Not Listed	UF
Sitta carolinensis	Nuthatch	6/15/2011	Year-Round Resident	Not Listed	Not Listed	UF
Spizella pusilla	Field Sparrow	6/15/2011	Year-Round Resident	Not Listed	Not Listed	PH, GH, DS
Sturnella magna	Eastern Meadowlark	6/15/2011	Year-Round Resident	Not Listed	Not Listed	PH, GH
Sturnus vulgaris	European Starling	6/7/2011	Year-Round Resident	Not Listed	Not Listed	PH, GH, DS
Tachycineta bicolor	Tree Swallow	6/22/2011	Breeding Season Resident	Not Listed	Not Listed	PH, GH
Turdus migratorius	American Robin	6/7/2011	Year-Round Resident	Not Listed	Not Listed	PH, GH, UF, DS
Zenaida macroura	Mourning Dove	6/28/2011	Year-Round Resident	Not Listed	Not Listed	PH, GH

Additional Bird Observations:

All identified bird species are common throughout southern Ohio.

REPTILE TABLE				
Scientific Name	**Common Name**	**Federally Listed:**	**State Listed:**	**Location (use vegetative community codes):**
Plestiodon fasciatus	Common Five-lined Skink	Not Listed	Not Listed	UF
Terrapene carolina carolina	Eastern Box Turtle	Not Listed	Species of Concern	UF, GH
Thamnophis sirtalis sirtalis	Eastern Garter Snake	Not Listed	Not Listed	PH
Nerodia sipedon sipedon	Northern Water Snake	Not Listed	Not Listed	PH

AMPHIBIAN TABLE				
Scientific Name	**Common Name**	**Federally Listed:**	**State Listed:**	**Location (use vegetative community codes):**
Bufo americanus americanus	Eastern American Toad	Not Listed	Not Listed	UF
Eurycea b. cirrigera	Southern Two-lined Salamander	Not Listed	Not Listed	UF
Plethodon cinereus	Redback Salamander	Not Listed	Not Listed	UF
Rana catesbeiana	American Bullfrog	Not Listed	Not Listed	PH, GH
Rana palustris	Pickerel Frog	Not Listed	Not Listed	UF
Rana pipiens pipiens	Northern Leopard Frog	Not Listed	Not Listed	GH. PH

Listed Species

FEDERALLY LISTED SPECIES	
Were any federally listed species observed within the project area?	**NO**
Were any suitable habitats for federally listed species (known to be within the range of the project area) observed within the project area?	**YES**
Were any **designated critical habitats** for federally listed species present within the project area?	**NO**

Additional summary observations on federally listed species:

Surveys for the federally threatened running buffalo clover and small whorled pogonia were conducted as part of the ecological survey. No individuals of either listed species were identified within the project area. Habitat, of varying degrees of quality, was identified within the project area. Areas of potential habitat were intensively surveyed during the field investigation and failed to identify any individuals.

Mist-net surveys for the Indiana bat were conducted between July 1 and August 15, 2011. No Indiana bats were captured during the survey. Potential roosting habitat was prevalent throughout the corridor, as forested areas are common throughout the project area.

No evidence of mussels, live or dead, was found during the ecological investigation of the streams within the project area.

STATE-LISTED SPECIES	
Are any state-listed species known to be within 1 mile of the project area?	**YES**
Were any state-listed species observed within the project area?	**YES**
If any state-listed species are known to be within a mile of the project area (Natural Heritage Database record or other), was suitable habitat for the species observed within the project area?	**YES**

Additional summary observations on state-listed species:

The state endangered southern monkshood (*Aconitum uncinatum*) is reported within the project area. The State Threatened Spanish oak (*Quercus falcata*) is reported within one mile of the project area. No Spanish oaks were observed during the ecological survey of the project area.

Several individuals of the endangered southern monkshood (*Aconitum uncinatum*) were identified during the field investigation. According to the Ohio Department of Natural Resources, Division of Nature Preserves (ODNR-DNAP), as of 2006 there are records of southern monkshood in Scioto County.

Several individuals of the state endangered primrose-leaved violet (*Viola primulifolia*) were indentified within the project area. According to the ODNR-DNAP, there is a pre-1980 record of primrose-leaved violet in Scioto County.

One state potentially threatened American chestnut (*Castanea dentata*) was identified in the project area during the ecological survey. According to the ODNR-DNAP, there are post-1980 records of American chestnut in Scioto County.

Several individuals of the state species of concern eastern box turtle (*Terrapene carolina carolina*) were encountered throughout the project area.

Federally Listed Species Table: All species observed within the project area, or known to be within the county(ies) the project is located within			
Scientific Name	**Common Name**	**Listing**	**Discuss Presence of Suitable Habitat(s) (note designated critical habitat if present)**
Myotis sodalis	Indiana Bat	Endangered	**Complete Attached Bat Habitat Worksheet in Appendix C. Include Figure(s) indicating the location of potential Indiana Bat habitat trees when feasible.** Potential habitat for the Indiana bat is abundant throughout the project area, as much of the project area consists of forest. As of July 7, 2011, the project area is not located within 5 miles of a capture record, or within 10 miles of a suspected hibernacula record. This project will impact trees that are part of forested areas greater than 100 acres and several perennial and intermittent streams are located within and in close proximity to the project area. No Indiana bats were captured during the mist-net survey for the project.
Trifolium stoloniferum	Running Buffalo Clover	Endangered	Potential habitat is located within the project area; however, a survey for the running buffalo clover did not locate the species within the project area.
Pleurobema clava	Clubshell	Endangered	No suitable habitat was identified within the project area.
Cyprogenia stegaria	Fanshell	Endangered	No suitable habitat was identified within the project area.
Epioblasma torulosa rangiana	Northern Riffleshell	Endangered	No suitable habitat was identified within the project area.
Lampsilis orbiculata (=l. abrupta)	Pink Mucket Pearly Mussel	Endangered	No suitable habitat was identified within the project area.
Villosa fabalis	Rayed Bean	Proposed Endangered	No suitable habitat was identified within the project area.
Plethobasus cyphyus	Sheepnose	Proposed Endangered	No suitable habitat was identified within the project area.
Epioblasma triquetra	Snuffbox	Proposed Endangered	No suitable habitat was identified within the project area.
Isotria medeoloides	Small Whorled Pogonia	Threatened	Potential habitat is located within the project area; however, a survey for the small whorled pogonia did not locate the species within the project area.
Spiraea virginiana	Virginia Spiraea	Threatened	Potential habitat is located along Long Run (Stream 18). No individuals were identified during the ecological survey of the project area.
Haliaeetus leucocephalus	Bald Eagle	Species of Concern	This project is not within ½ mile of known nesting activity, as of July 29, 2011. The nearest nest is located approximately 7 miles from the proposed project.
Cryptobranchus alleganiensis	Eastern Hellbender	Species of Concern	No suitable habitat was identified within the project area.
Crotalus horridus	Timber Rattlesnake	Species of Concern	Potential habitat for the timber rattlesnake was found within the project area.

State-Listed Species Table: All species observed within the project area, or known to be within 1 mile of the project area			
Scientific Name	**Common Name**	**Listing**	**Discuss Presence of Suitable Habitat(s)**
Aconitum uncinatum	Southern monkshood	Endangered	Several individuals were identified along Stream 18 (Long Run) within the woods.
Castanea dentata	American chestnut	Potentially Threatened	One individual was identified along the wooded hillside east of Swauger Valley Road.
Quercus falcata	Spanish oak	Threatened	This species is reported to exist within 1 mile of the project area.
Terrapene carolina carolina	Eastern Box Turtle	Concern	Several individuals were encountered throughout the project area.
Viola primulifolia	Primrose-leaved violet	Endangered	Several populations were identified along old logging roads within the project area.

IMPACT SUMMARY

STREAMS IMPACTS	
Will any streams be impacts by the project? (If NO, delete the **Stream Impact Table**)	**YES**
Total number of streams impacted by the project (list multiple alignments separately):	21
Total length of streams impacted by the project (feet):	9,308 permanent and 300 temporary

Stream Impacts Table			**Alternative Impacts (ft.)**		
Stream I.D.	**Use Designation**	**USACE Flow Characteristics**	**Alternative 1**	**Alternative 2**	**Alternative 3**
Stream 17-1-1	Class I PHWH	Non-Relatively Permanent Water	73		
Stream 17a/b	Modified Class II PHWH	Relatively Permanent Water- Perennial	831		
Stream 17c	Modified Class II PHWH	Relatively Permanent Water- Seasonal	960		
Stream 17c-1	Modified Class II PHWH	Non-Relatively Permanent Water	394		
Stream 17d	Modified Class II PHWH	Relatively Permanent Water- Seasonal	223		
Stream 18 (Long Run)	Warmwater Habitat	Relatively Permanent Water- Perennial	55 (150 temporary)		
Stream 18-1	Modified Class II PHWH	Non-Relatively Permanent Water	417		
Stream 18b	Modified Class II PHWH	Relatively Permanent Water- Seasonal	244		
Stream 19	Modified Class II PHWH	Relatively Permanent Water- Perennial	500		
Stream 19-1	Modified Class II PHWH	Relatively Permanent Water- Seasonal	662		
Stream 20	Modified Warmwater habitat	Relatively Permanent Water- Perennial	23 (150 temporary)		
Stream 20-1	Class II PHWH	Non-Relatively Permanent Water	720		
Stream 20-2	Modified Class I PHWH	Non-Relatively Permanent Water	375		
Stream 21	Modified Class II PHWH	Relatively Permanent Water- Seasonal	802		
Stream 21a	Modified Class II PHWH	Relatively Permanent Water- Seasonal	745		
Stream 22a/b	Modified Class II PHWH	Relatively Permanent Water- Perennial	1,218		
Stream 22a-1	Modified Class II PHWH	Non-Relatively Permanent Water	318		
Stream 23/k	Class II PHWH	Relatively Permanent Water- Seasonal	415		
Stream 24-1	Modified Class II PHWH	Non-Relatively Permanent Water	333		
Stream 18-2	Modified Class II PHWH	Relatively Permanent Water- Seasonal	0		
Stream 18-2-1	Modified Class II PHWH	Relatively Permanent Water- Seasonal	0		

Total impacts (ft)	**9,608 total (9,308 permanent and 300 temporary)**		

Discuss the type of impact(s) expected to each stream. If a stream is impacted at multiple locations, discuss each location separately and include the distance (stream length) from other impacted locations.
Stream 17-1-1 will be culverted. **Stream 17a/b** will be culverted. **Stream 17 c** will likely be relocated. **Stream 17c-1** will likely be relocated. **Stream 17d** will be culverted. **Stream 18 (Long Run)** will be bridged. **Stream 18-1** will likely be relocated. **Stream 18b** will be relocated. **Stream 19** will be relocated. **Stream 19-1** will likely be culverted and relocated. **Stream 20** will be bridged. **Stream 20-1** will likely be relocated and culverted. **Stream 20-2** will likely be relocated. **Stream 21** will be culverted. **Stream 21a** will likely be relocated and culverted. **Stream 22a/b** will relocated and culverted. **Stream 22a-1** will likely be relocated. **Stream 23k** will be culverted. **Stream 24-1** will be culverted. **Stream 18-2** will likely not be impacted **Stream 18-2-1** will likely not be impacted.

WETLAND IMPACTS	
Will any wetlands be impacted by the project? (If NO, delete the **Wetland Impact Table**)	**YES**
Total number of wetlands impacted by the project	33
Total area of wetlands impacted by the project (acres):	3.893

Wetland Impacts Table			Alternative Impacts (ac)		
Wetland I.D.	**Provisional Wetland Category**	**Hydrologic Connection**	**Alternative 1**	**Alternative 2**	**Alternative 3**
Wetland 1	Category 1	Adjacent	0.141		
Wetland 2/3	Modified Category 2	Adjacent	0.517		
Wetland 4	Modified Category 2	Adjacent	0.089		
Wetland W8WL6	Modified Category 2	Abutting	0.221		
Wetland W8WL8	Category 1	Abutting	0.020		
Wetland 5/W8WL7	Modified Category 2	Abutting	0.066		
Wetland 6	Modified Category 2	Adjacent	0.018		
Wetland 7	Category 1	Adjacent	0.108		
Wetland 8	Modified Category 2	Adjacent	0.028		
Wetland 9	Modified Category 2	Abutting	0.073		
Wetland 12	Modified Category 2	Adjacent	0.811		
Wetland 13	Modified Category 2	Adjacent	0.233		
Wetland 14	Category 1	Adjacent	0.010		
Wetland 15	Modified Category 2	Adjacent	0.041		
Wetland 16	Category 1	Abutting	0.036		
Wetland 17	Modified Category 2	Adjacent	0.001		
Wetland 18/W9WL2	Modified Category 2	Abutting	0.038		
Wetland 19	Category 2	Abutting	0.180		
Wetland 20	Modified Category 2	Adjacent	0.062		
Wetland 21	Category 1	Adjacent	0.082		
Wetland W9WL4	Modified Category 2	Adjacent	0.029		
Wetland 22	Category 1	Adjacent	0.344		
Wetland 24	Category 1	Adjacent	0.069		
Wetland 26	Category 1	Adjacent	0.483		
Wetland 28	Modified Category 2	Abutting	0.101		
Wetland 29	Category 1	Abutting	0.001		
Wetland 30	Category 1	Adjacent	0.011		
Wetland 31	Category 1	Adjacent	0.027		
Wetland 32	Category 2	Abutting	0.019		

Wetland Impacts Table			Alternative Impacts (ac)		
Wetland I.D.	Provisional Wetland Category	Hydrologic Connection	Alternative 1	Alternative 2	Alternative 3
Wetland 33	Category 1	Adjacent	0.021		
Wetland 34	Category 1	Adjacent	0.013		
Wetland 35	Modified Category 2	Abutting	0.000		
Total impacts (ac)			**3.893**		

Discuss the types of impact(s) expected to each wetland.
Wetland 1 will be filled. **Wetland 2/3** will be filled. **Wetland 4** will be filled. **Wetland W8WL6** will be filled. **Wetland W8WL8** will be filled. **Wetland 5/W8WL7** will be filled. **Wetland 6** will be filled. **Wetland 7** will be filled. **Wetland 8** will be filled. **Wetland 9** will be filled. **Wetland 12** will be filled. **Wetland 13** will be filled. **Wetland 14** will be filled. **Wetland 15** will be filled. **Wetland 16** will be filled. **Wetland 17** will be filled. **Wetland 18/W9WL2** will be filled. **Wetland 19** will be filled. **Wetland 20** will be filled. **Wetland 21** will be filled. **Wetland W9WL4** will be filled. **Wetland 22** will be filled. **Wetland 24** will be filled. **Wetland 26** will be filled. **Wetland 28** will be filled. **Wetland 29** will be filled. **Wetland 30** will be filled. **Wetland 31** will be filled. **Wetland 32** will be filled. **Wetland 33** will be filled. **Wetland 34** will be filled. **Wetland 35** will not be impacted.

POTENTIALLY JURISDICTIONAL DITCH IMPACTS	
Will any potentially jurisdictional ditches be impacted by the project? (If NO, delete the **Potentially Jurisdictional Ditch Impact Table**)	**YES**
Total number of potentially jurisdictional ditches impacted by the project:	2
Total area of potentially jurisdictional ditches impacted by the project (acres):	0.02

Potentially Jurisdictional Ditch Impact Table			**Alternative Impacts (feet/ac.)**		
Ditch I.D.	**Receiving Waters**	**USACE Flow Characteristics**	**Alternative 1**	**Alternative 2**	**Alternative 3**
Railroad Ditch 1	Stream 22a/b	Relatively Permanent Water-Seasonal	89 ft 0.01 acre		
Railroad Ditch 2	Stream 22a/b	Relatively Permanent Water-Seasonal	89 ft 0.01 acre		
Total impacts (ac)			**178 ft** **0.02 acre**		

Discuss the types of impact(s) expected to each potentially jurisdictional ditch.
Railroad Ditch 1 will not be impacted by the proposed project. **Railroad Ditch 2** will not be impacted by the proposed project.

POND, LAKE, RESERVOIR IMPACTS	
Will any ponds, lakes, or reservoirs be impacted by the project? (If NO, delete the **Pond Impact Table**)	**YES**
Total number of ponds, lakes or reservoirs impacted by the project:	5
Total area of ponds, lakes or reservoirs impacted by the project (acres):	2.70

Pond, Lake, Reservoir Impacts Table			**Alternative Impacts (ac)**		
Water Body I.D.	**Receiving Waters**	**Hydrologic Connection**	**Alternative 1**	**Alternative 2**	**Alternative 3**
Pond 4	Stream 18b	Non-Isolated	1.418		
Pond 5	Stream 20	Non-Isolated	0.034		
Pond 6	Stream 21a	Non-Isolated	0.189		
Pond 7	Outlets to farm tiles to Railroad Ditch 1	Non-Isolated	0.592		
Pond 8	Stream 22a/b	Non-Isolated	0.467		
		Total impacts (ac)	**2.70**		

Discuss the types of impact(s) expected to each pond, lake, or reservoir.
All of the impacted ponds will be filled as a result of the construction of the project.

IMPACTS TO AQUATIC LIFE
Discuss the expected impacts to aquatic fauna (fish, mussels, aquatic macroinvertebrates). Specific stream locations should be referenced when appropriate.
Aquatic fauna that inhabit streams that will be relocated will likely be adversely impacted by the construction of the proposed project. Aquatic fauna that are mobile will be able to migrate up or downstream of the proposed relocation. However, impacts to less mobile fauna will likely result in permanent impacts to these species. It is expected that aquatic fauna will begin to recolonize the relocated portion of the stream upon the completion of construction as the new channel will likely be tied into existing drainage ways. Aquatic fauna that inhabit streams that will be culverted will likely be adversely impacted by the construction of the proposed project. The installation of the proposed culverts will permanently alter these streams making them less suitable for some aquatic organisms. Aquatic fauna that are mobile will be able to migrate up or downstream of the proposed relocation. However, impacts to less mobile fauna will likely result in permanent impacts to these species. Aquatic fauna that inhabit streams that will be bridged will likely be minimally impacted as a result of the construction of these bridge structures. These bridges have been designed to minimize the amount of in-stream work. Localized permanent impacts, including the installation of piers and erosion control in the form of riprap, will likely impact less mobile aquatic fauna. Aquatic fauna with the ability to migrate upstream and downstream of the proposed structures will likely be temporarily impacted as they will be able to recolonize the areas around the new structures upon the completion of the structure.

OTHER WATER QUALITY IMPACTS
Discuss potential short term and long term water quality impacts that are likely expect to occur as a result of the proposed project.
The proposed project will permanently and temporarily impact Waters of the US, which will result in the lowering of water quality, which may possibly affect aquatic life and wildlife. Impacts include the placement of culverts, permanent erosion control, bridging, and the relocation of existing channels as part of the proposed project. During the installation of these culverts, aquatic organisms at the impact site and downstream of the impacts could be adversely affected by the temporary increase in sediments in the water column from the construction activities. These temporary impacts are expected to be minor and localized around the area of impact. All impacts to water quality will be minimized through the use of construction best management practices (BMPs) for sediment and erosion controls that include the installation of silt fencing and adherence to the project's Stormwater Pollution Prevention Plan (SWPPP). Proposed culverts have been designed so as not to impede flow or alter the stream's ability to transport sediment. All proposed bridge structures were designed using BMPs and will be installed above the OHWM of the streams when feasible so as not to impact these features. The project has been designed using standard ODOT design procedures that provide culverts that are wide enough to accommodate the connection of ecological systems, as the proposed culverts were designed using culverts 1-foot diameter larger than what is typically specified. In addition, the proposed culverts have been designed for a 50-year flood, but will allow the conveyance of a 100-year flood without causing any significant damage.
Discuss how the project will be implemented to minimize these water quality impacts.
Short-term water quality impacts resulting from runoff from disturbed areas during construction will be minimized through the use of sediment and erosion controls in accordance with the ODOT *Construction and Materials Specifications*. Longer duration water quality impacts associated with roadway runoff will be minimized through the implementation of post-construction best management practices in accordance with the ODOT *Location and Design Manual*.

VEGETATIVE COMMUNITY AND LAND COVER IMPACTS	
Will any vegetative communities be impacted by the project? (If NO, delete the **Vegetative Community Impact Table**)	**YES**
Total number of vegetative communities impacted by the project:	10
Total area of vegetative communities impacted by the project (acres):	328.10
Describe any impacts to vegetative communities (with emphasis on rare or unique communities) from an ecological perspective:	
No rare or unique habitats exist within the project area.	

Vegetative Community and Land Cover Impacts Table			**Alternative Impacts (ac)**		
Vegetative Community	**Disturbance Level**	**Unique, Rare, or High Quality**	**Alternative 1**	**Alternative 2**	**Alternative 3**
Barren Land (Rock/Sand/Clay)	Extreme Disturbance/Ruderal Community	NO	23.93		
Cultivated Crops	Extreme Disturbance/Ruderal Community	NO	12.77		
Developed Open Space	High Disturbance	NO	19.07		
Grassland/Herbaceous	High Disturbance	NO	112.68		
Open Water	High Disturbance	NO	2.74		
Pasture/Hay	High Disturbance	NO	5.16		
Pasture/Hay	Extreme Disturbance/Ruderal Community	NO	25.01		
Scrub/Shrub	High Disturbance	NO	3.46		
Upland Forest	High Disturbance	NO	103.81		
Upland Forest	Low Disturbance	NO	19.47		
		Total impacts	**328.10**		

IMPACTS TO TERRESTRIAL WILDLIFE
Discuss any terrestrial habitat alternations that may result from construction activities:
The previous table summarizes the expected terrestrial habitat impacts for all of the terrestrial habitats identified within the project area. It is expected that all habitat not impacted by pavement will likely be maintained as ODOT ROW, which would likely be considered DS habitat. The loss of the other habitats should not result in local or statewide decline of these habitats, as these habitats are abundant within the immediate vicinity of the project. In addition, species that utilize these habitats would not be expected to be permanently impacted by the project, as suitable habitat is abundant throughout the area.
Discuss the expected duration of the impacts (temporary/short term or permanent/long-term):
Impacts to terrestrial habitat within the construction limits and permanent ROW will be permanent. Areas not under pavement as a result of this project will likely be converted into DS. Areas of temporary ROW will likely be converted to DS.
Discuss if the project impacts would result in the likely extirpation of any taxa from the area:
Because of the level of disturbance found in the majority of the habitats within the project area, and because the vast majority of the identified species are common throughout Ohio, this project will likely not result in the extirpation of these common species. Two state-endangered and one state potentially threatened species were found within the project area. This included the endangered southern monkshood (*Aconitum uncinatum*) and primrose-leaved violet (*Viola primulifolia*) and the potentially threatened American chestnut (*Castenea dentata*). It is unlikely that this project will cause the extirpation of any of these species as suitable habitat for these species is found throughout Scioto County and southern Ohio in general. One state species of concern eastern box turtle (*Terrapene carolina carolina*) were encountered throughout the project area. The box turtle is common throughout the project area and would not be extirpated due to the construction of this project.
Include a general discussion of impacts to terrestrial fauna (mammals, birds, reptiles, and amphibians):
All animal species within the project area will have to relocate from the limits of the project area. Since large amounts of similar habitat is available within the immediate vicinity of the project and because all identified animal species are common throughout southern Ohio, no long-term adverse impacts to populations of these species are expected as a result of this project.

FEDERALLY LISTED SPECIES IMPACTS	
Will any federally listed species or suitable habitat for federally listed potentially be impacted by the project? (If NO, delete the **Federally Listed Species Impact Table**)	YES
Will any **designated critical habitats** potentially be impacted by the project?	NO

Federally Endangered Indiana Bat (*Myotis sodalis*) Impact Table				
Alternative I.D.	**Potential Maternity Roost Tree Impacts (#)**	**Potential Roost Tree Impacts (#)**	**Total Forest Habitat Impacts (ac)**	**Anticipated Impacts**
Alternative 1	Unknown	Unknown	123 +/-	Not Likely
Discussion of Impacts:				

Federally Listed Species Impact Summary Table (List Each Species Within the County/Range)			**Anticipated Impacts**		
Scientific Name	**Common Name**	**Listing**	**Alternative 1**	**Alternative 2**	**Alternative 3**
Haliaeetus leucocephalus	Bald Eagle	Species of Concern	None	(Choose)	(Choose)
Pleurobema clava	Clubshell	Endangered	None	(Choose)	(Choose)
Cryptobranchus alleganiensis alleganiensis	Eastern Hellbender	Species of Concern	None	(Choose)	(Choose)
Cyprogenia stegaria =c. irrorata	Fanshell	Endangered	None	(Choose)	(Choose)
Epioblasma torulosa rangiana	Northern Riffleshell	Endangered	None	(Choose)	(Choose)
Lampsilis orbiculata = l. abrupt	Pink Mucket Pearly Mussel	Endangered	None	(Choose)	(Choose)
Trifolium stoloniferum	Running Buffalo Clover	Endangered	Not Likely	(Choose)	(Choose)
Isotria medeoloides	Small whorled pogonia	Threatened	Not Likely	(Choose)	(Choose)
Crotalus horridus	Timber Rattlesnake	Species of Concern	Not Likely	(Choose)	(Choose)
Spiraea virginiana	Virginia Spirea	Threatened	Not Likely	(Choose)	(Choose)

For each species discuss the presence of, and anticipated impacts to, suitable habitats. The discussion should justify the level of anticipated impact.

No impacts to the **bald eagle** are anticipated as a result of the proposed project. The nearest bald eagle nest is located approximately 7 miles WSW of the project area.

No impacts to the **eastern hellbender** are anticipated as a result of the proposed project as no streams were identified in the project area large enough to support this species.

No impacts to any **mussel species** are anticipated as a result of this project. No evidence of mussels, live or dead, was identified in any of the streams located within the study area.

Impacts to the **small whorled pogonia** and **running buffalo clover** are not anticipated as neither of these species was identified within the project area during the field investigations targeting these species. Potentially suitable habitat for both of these species will be impacted as part of this project.

Impacts to **Virginia spirea** are not anticipated from the proposed project. It was determined after a survey for Virginia spirea in 2003 that it is not likely that this species is found within the project area due to the heavy canopy cover over streams with suitable habitat and due to impacts from logging, agriculture, and land development in the vicinity of the project area.

Potential habitat for the **timber rattlesnake** was found within the project area. However, in 2003, the ODNR agreed that the timber rattlesnake is very unlikely to inhabit or utilize potential habitat within the project area due to human disturbances.

STATE-LISTED SPECIES IMPACTS	
Will any state listed species potentially be impacted by the project? (If NO, delete the **State-Listed Species Impact Table**)	YES

State Listed Species Impact Table **(List Each Species Found Within or Known to be Within 1 Mile of the Project Area)**			**Anticipated Impacts**		
Scientific Name	**Common Name**	**Listing**	**Alternative 1**	**Alternative 2**	**Alternative 3**
Aconitum uncinatum	Southern monkshood	Endangered	Likely	(Choose)	(Choose)
Castanea dentata	American chestnut	Potentially Threatened	Likely	(Choose)	(Choose)
Quercus falcata	Spanish oak	Threatened	Not Likely	(Choose)	(Choose)
Terrapene carolina carolina	Eastern Box Turtle	Concern	Likely	(Choose)	(Choose)
Viola primulifolia	Primrose-leaved violet	Endangered	Likely	(Choose)	(Choose)

For each species discuss the presence of, and anticipated impacts to, suitable habitats. The discussion should justify the level of anticipated impact.

Several individuals of southern monkshood were identified along Stream 18 (Long Run). All of the identified individuals are located within the project limits and will be impacted as a result of this project. No other individuals were identified in the vicinity of the project during the ecological survey of the project area.

One young American chestnut tree was found within the project area in the forested area located along the east side of Swauger Valley Road. The tree is located within the project area and will be impacted as a result of this project. Suitable habitat for the American chestnut is prevalent throughout the vicinity of the project.

No Spanish oaks were identified during the ecological evaluation of the project area. Suitable habitat, consisting dry upland woods, will be impacted by the project. However, dry upland woods are a dominant community type within Scioto County and this project should not have an adverse impact on the amount of potential habitat found in the vicinity of the project.

Several individuals of the primrose-leaved violet were identified during the ecological investigation for the proposed project. The violet was found along the edges of several logging roads that are prevalent throughout the project area. This species was also found in areas adjacent to the project area that will not be impacted by this project.

Several individuals of the state species of concern eastern box turtle (*Terrapene carolina carolina*) were encountered throughout the project area. Impacts to individuals will likely occur as a result of this project. However, impacts to the overall population of this species would likely be negligible as they are abundant throughout the project area and southern Ohio.

LITERATURE CITED

Anderson, D. M. 1982, unpublished. Plant communities of Ohio: a preliminary classification and description. Division of Natural Areas and Preserves, Ohio Department of Natural Resources, Columbus. 183p. Unpublished.

Andreas, B. K., J.J Mack, and J.S. McCormac. 2004. Floristic Quality Assessment Index (FQAI) for vascular plants and mosses for the State of Ohio. Ohio Environmental Protection Agency, Division of Surface Water, Wetland Ecology Group, Columbus, Ohio. 219 p.

Cowardin, L. M., V. Carter, F.C. Golet, and E. T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Fish and Wildlife Service. Biological Services Program Rept. FWS/OBS-79/31. 103 p.

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

U.S. Army Corps of Engineers. 2010. *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region*, ed. J. S. Wakeley, R. W. Lichvar, C. V. Noble, and J. F. Berkowitz. ERDC/EL TR-10-9. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

Ohio Department of Transportation (ODOT). 2010. Ecological Manual.

Ohio Environmental Protection Agency (OEPA). 1987a. Biological Criteria for the Protection of Aquatic Life: Volume I, The Role of Biological Data in Water Quality Assessment. Division of Water Quality Monitoring and Assessment, Surface Water Section, Columbus, OH.

_____. 1987b. Biological Criteria for the Protection of Aquatic Life: Volume II, Users Manual for Biological Field Assessment of Ohio Surface Waters. Division of Water Quality Monitoring and Assessment, Surface Water Section, Columbus, OH.

_____. 1989. Biological Criteria for the Protection of Aquatic Life: Volume III, Standardized Biological Field Sampling and Laboratory Methods for Assessing Fish and Macroinvertebrate Communities. Division of Water Quality Monitoring and Assessment, Surface Water Section, Columbus, OH.

_____. 2001. Ohio Rapid Assessment Method for Wetlands v. 5.0, User's Manual and Scoring Forms. Ohio EPA Technical Report WET/2001-1. Ohio EPA, Division of Surface Water. Columbus, Ohio.

_____. 2006. Methods for Assessing Habitat in Flowing Waters: Using the Qualitative Habitat Evaluation Index (QHEI). OHIO EPA Technical Bulletin EAS/2006-06-1. Ecological Assessment Section, Division of Surface Water Groveport, OH.

_____. 2008a. Updates to Biological Criteria for the Protection of Aquatic Life: Volume II and Volume II Addendum. Users Manual for Biological Field Assessment of Ohio Surface Waters. Ecological Assessment Section, Division of Surface Water Groveport, OH.

_____. 2008b. Updates to Biological Criteria for the Protection of Aquatic Life: Volume III. Standardized Biological Field Sampling and Laboratory Methods for Assessing Fish and Macroinvertebrate Communities. Ecological Assessment Section, Division of Surface Water Groveport, OH.

_____. 2009. Field Evaluation Manual for Ohio's Primary Headwater Habitat Streams (v 2.3). Ohio EPA, Division of Surface Water. Columbus, Ohio.

APPENDICIES

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☑	Literature Review Mapping Results – Figure 2
☑	Ecological Resource Mapping – Figures 2 and 11
☑	Other (List): Figure 2: DNAP Biodiversity Database and Field Survey T&E Results, Figure 3: Ecoregion Map, Figure 4: FEMA Map, Figure 5: 14-Digit HUC Map, Figure 6: National Landcover Dataset Map, Figure 7: NWI and OWI Map, Figure 8: Physiographic Regions Map, Figure 9: Soil Map, Figure 10: Vegetative Communities Map, Figure 11 – Ecological Survey Results, Figure 12 – Wetland Delineation Sample Plots.
2 - Photographs	
☑	Photograph Location Map – Appendix 2 Figure 1: Sheets 1 - 10
☑	Photographs
3 - Data Forms	
☑	Stream Characterization/Assessment Data Forms
☑	Wetland Characterization/Assessment Data Forms
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☐	Other (List):
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☑	ODNR, Division of Natural Areas and Preserves – Natural Heritage Database Information Request
☑	USFWS – Federally Listed Species Information Request
☑	Other (List): ODNR DNAP – State Listed Species Abstracts and USFWS Correspondence

APPENDIX 1
Figures

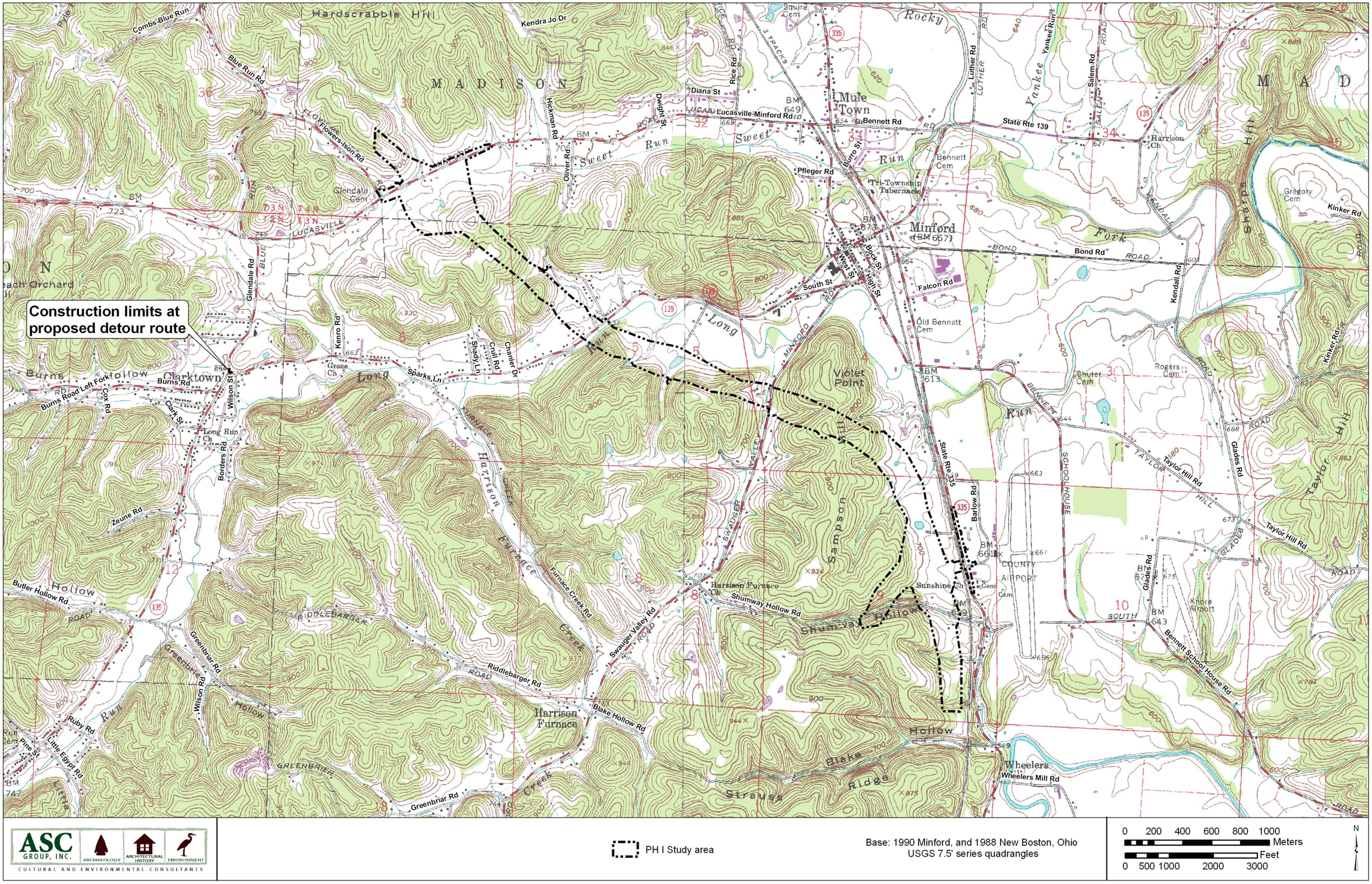


Figure 1. USGS 7.5' topographic maps.

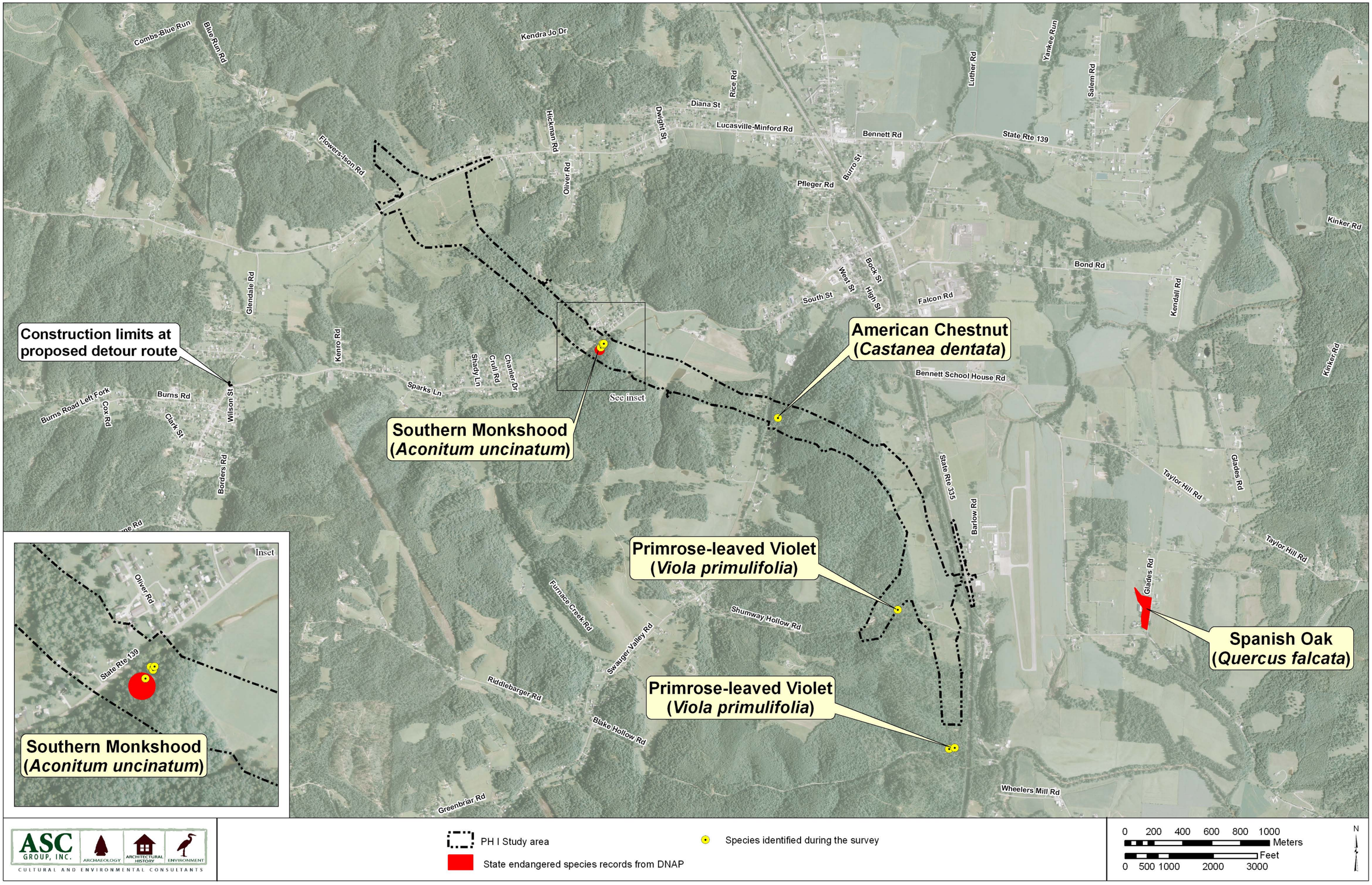


Figure 2. State endangered species map from DNAP GIS shapefiles and ecological survey.

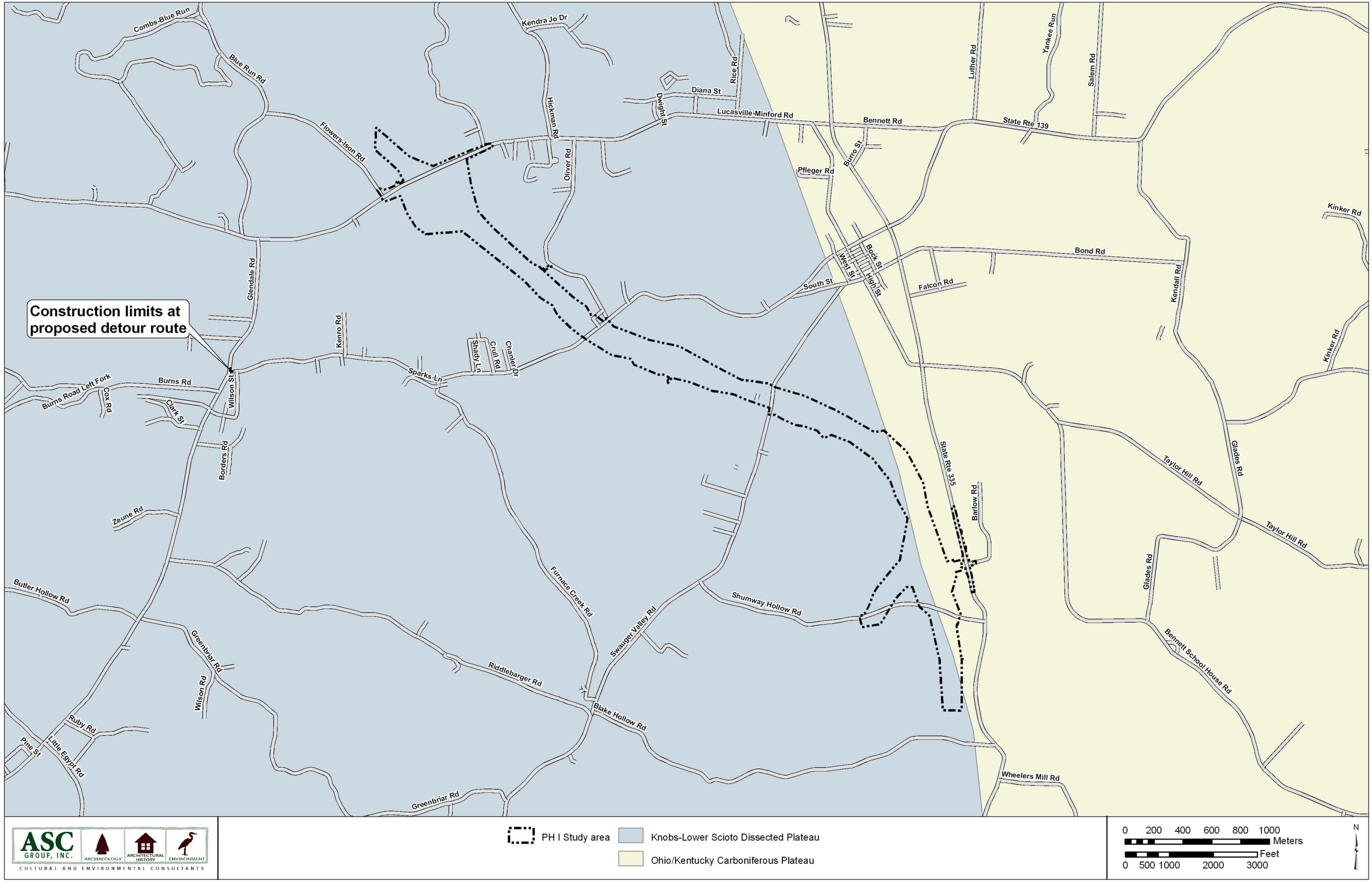


Figure 3. Ecoregion map.

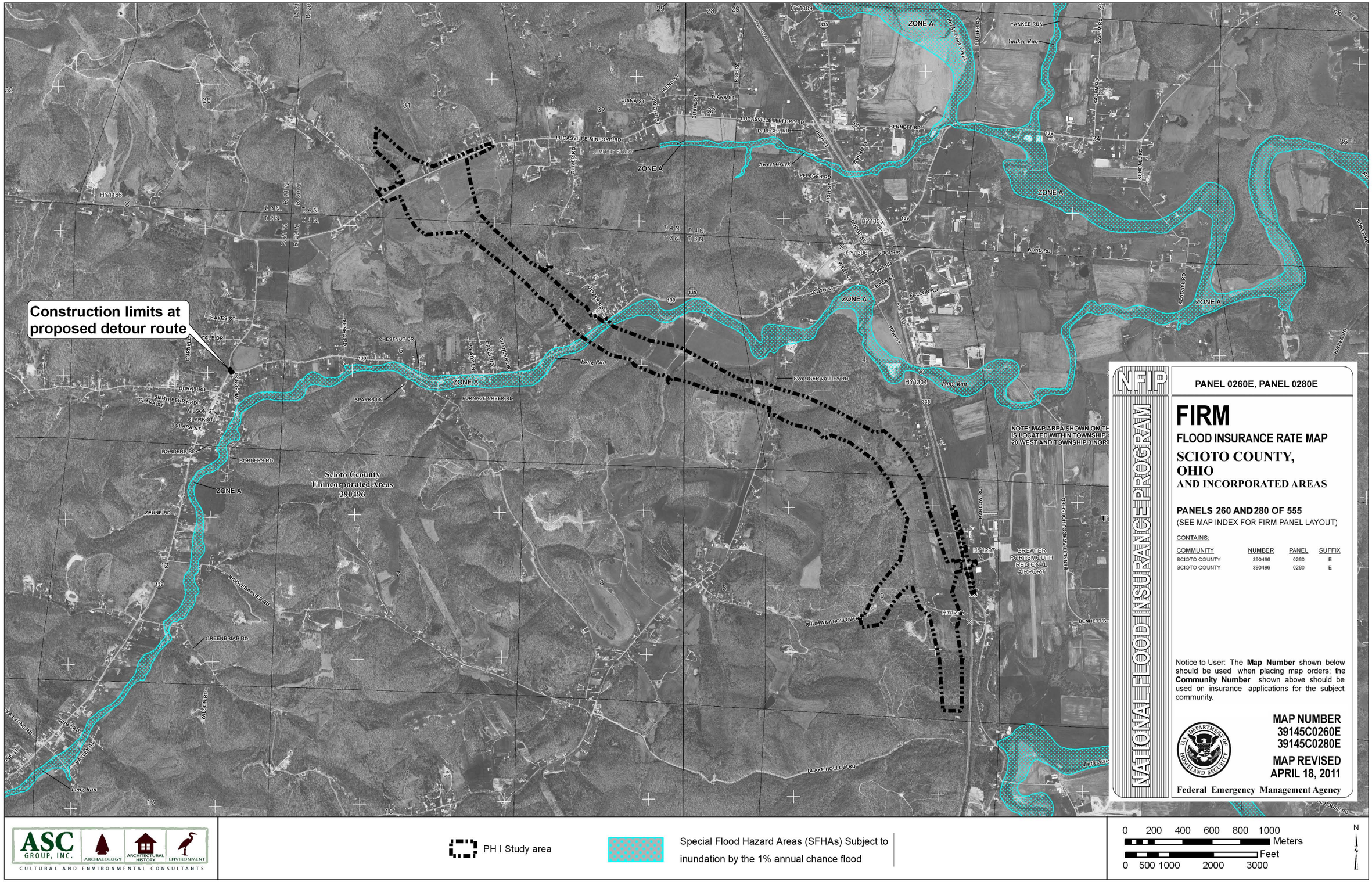
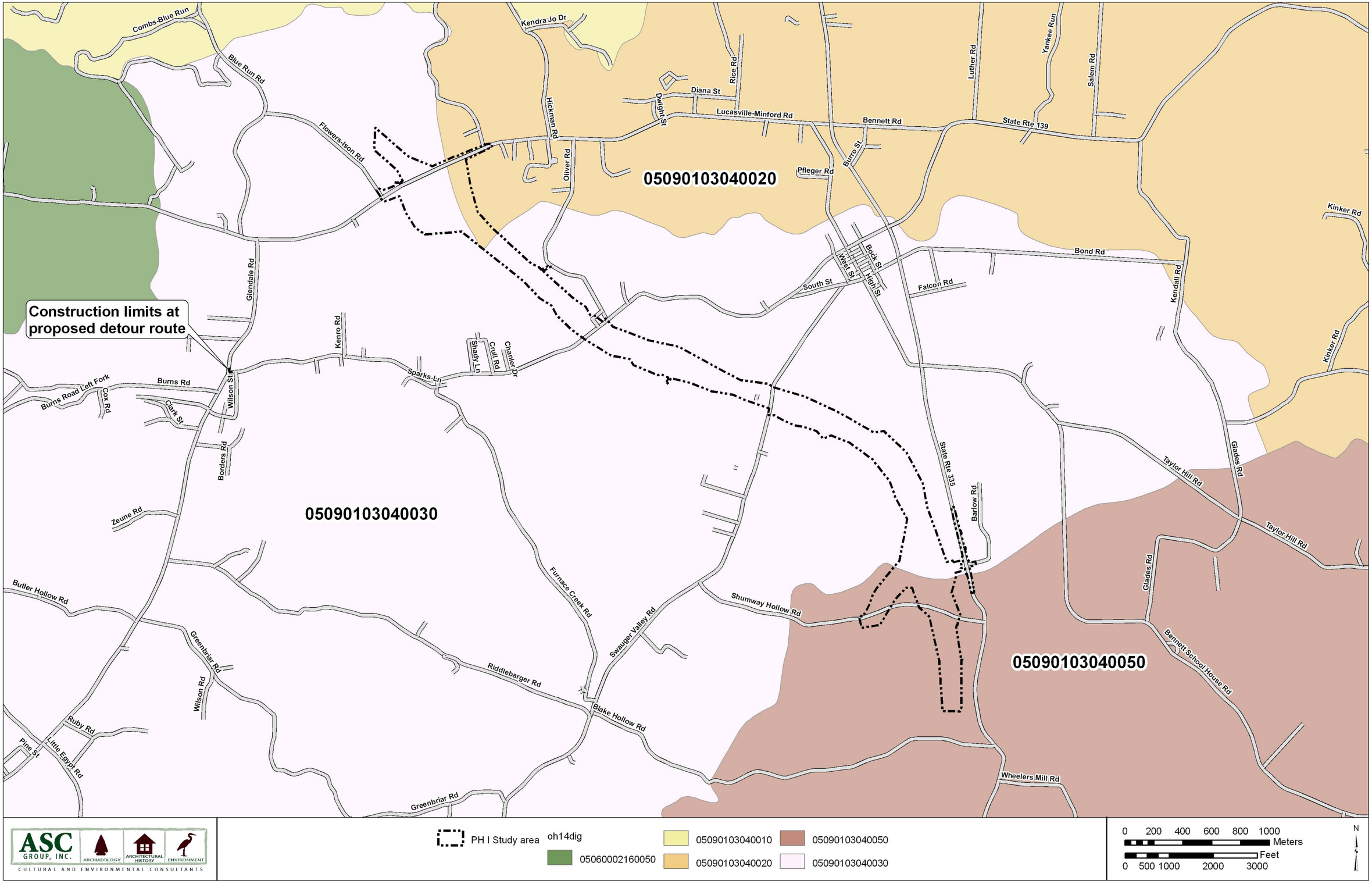


Figure 4. FEMA map.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Combs-Blue Run
Blue Run Rd
Flowers-Ison Rd
Kendra Jo Dr
Hickman Rd
Oliver Rd
Diana St
Dwight St
Rice Rd
Lucasville-Minford Rd
Bennett Rd
State Rte 139
Luther Rd
Yankee Run
Salem Rd
Pfleger Rd
Burro St
Kinker Rd
Bond Rd
Book St
West St
High St
South St
Falcon Rd
Kendall Rd
Glendale Rd
Kenro Rd
Shady Ln
Crull Rd
Chanler Dr
Sparks Ln
Burns Road Left Fork
Burns Rd
Cox Rd
Clark St
Wilson St
Borders Rd
Zeune Rd
Butler Hollow Rd
Greenbriar Rd
Wilson Rd
Ruby Rd
Pine St
Little Egypt Rd
Furnace Creek Rd
Swauger Valley Rd
Riddlebarger Rd
Blake Hollow Rd
Greenbriar Rd
State Rte 335
Barlow Rd
Shumway Hollow Rd
Taylor Hill Rd
Glades Rd
Bennett School House Rd
Wheelers Mill Rd
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ARCHITECTURAL HISTORY
ENVIRONMENT
CULTURAL AND ENVIRONMENTAL CONSULTANTS
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Figure 5. HUC.

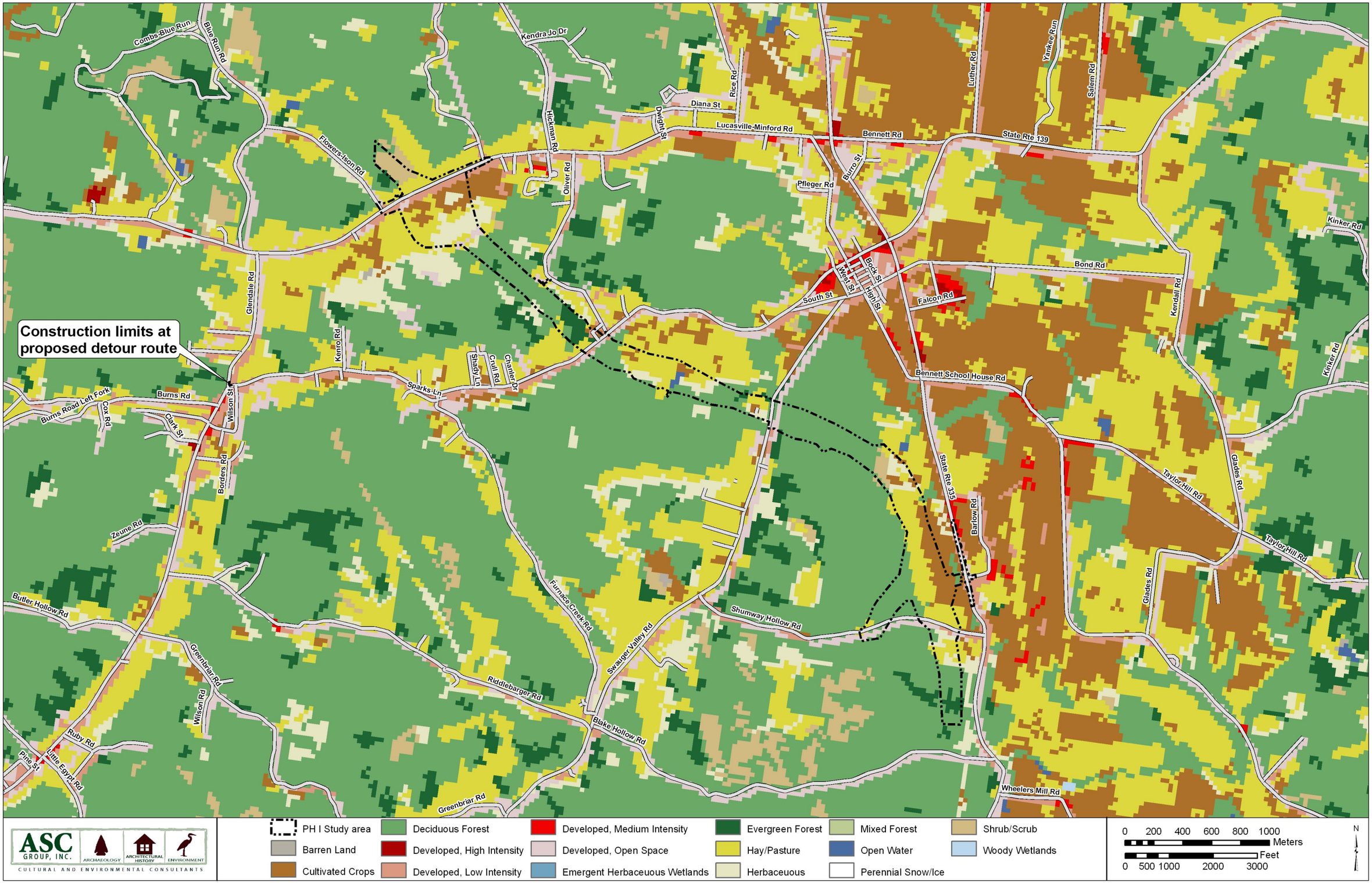


Figure 6. National Land Cover Dataset.

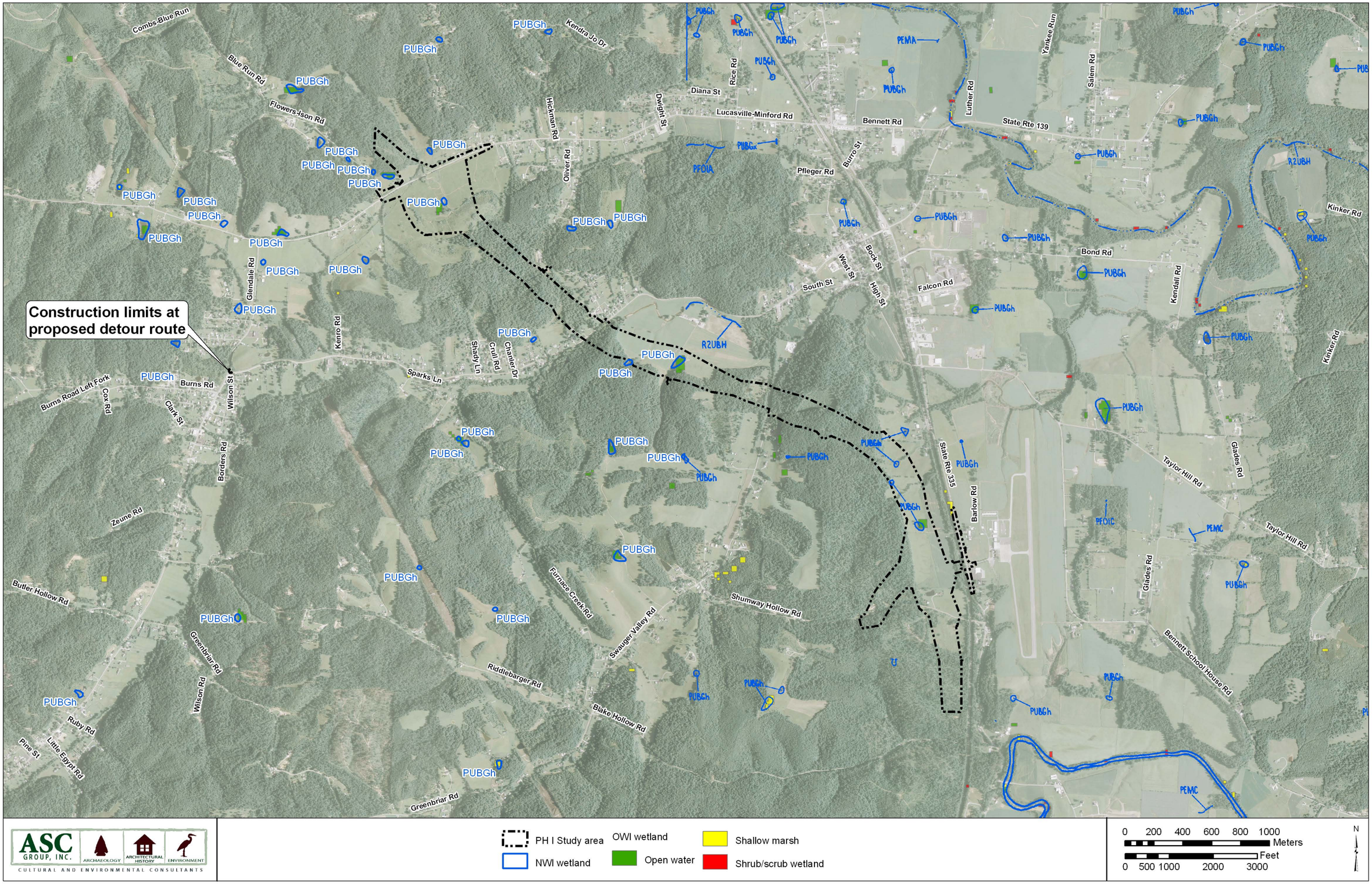


Figure 7. NWI and OWI wetlands.

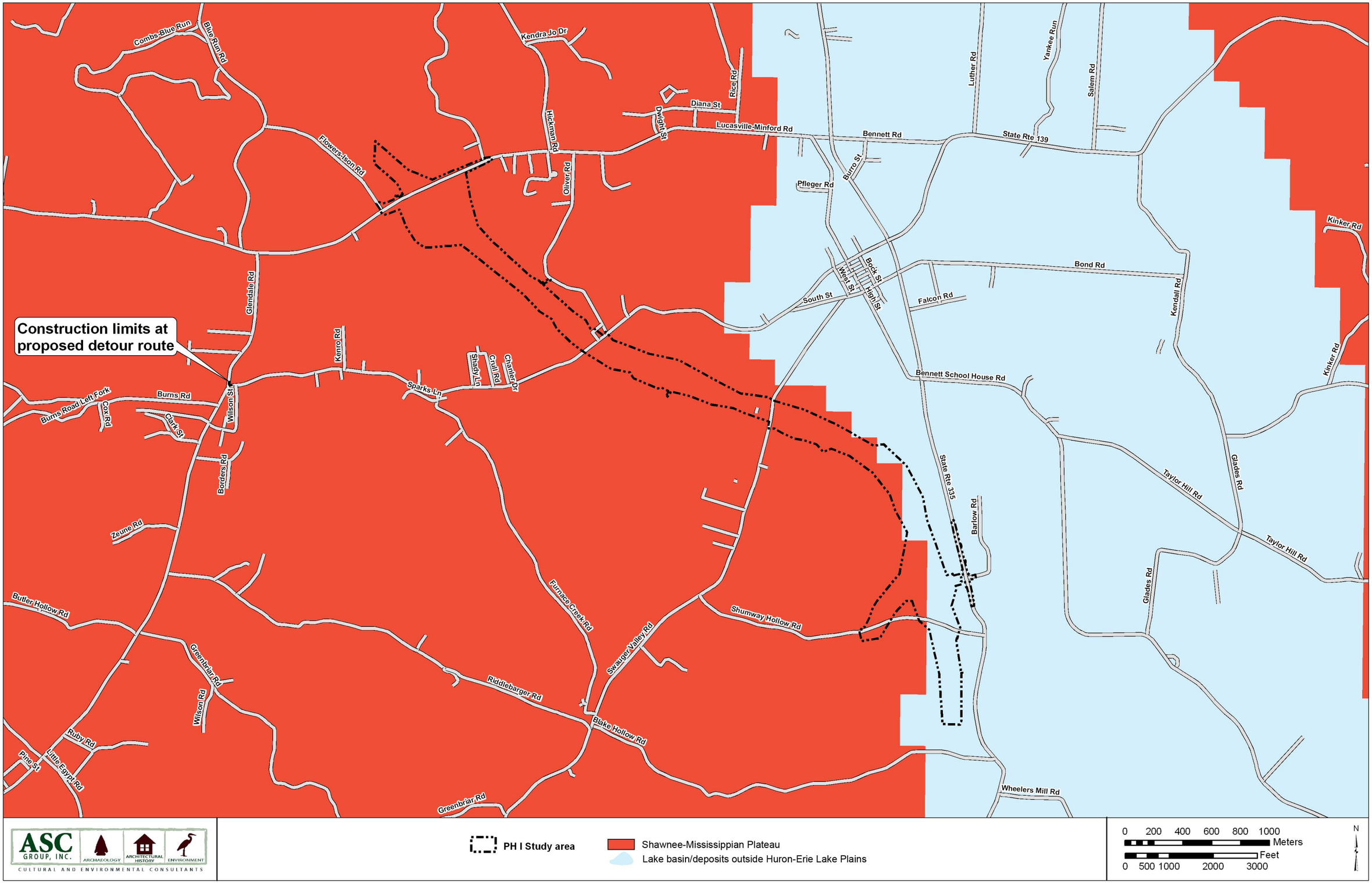


Figure 8. Physiographic regions map.

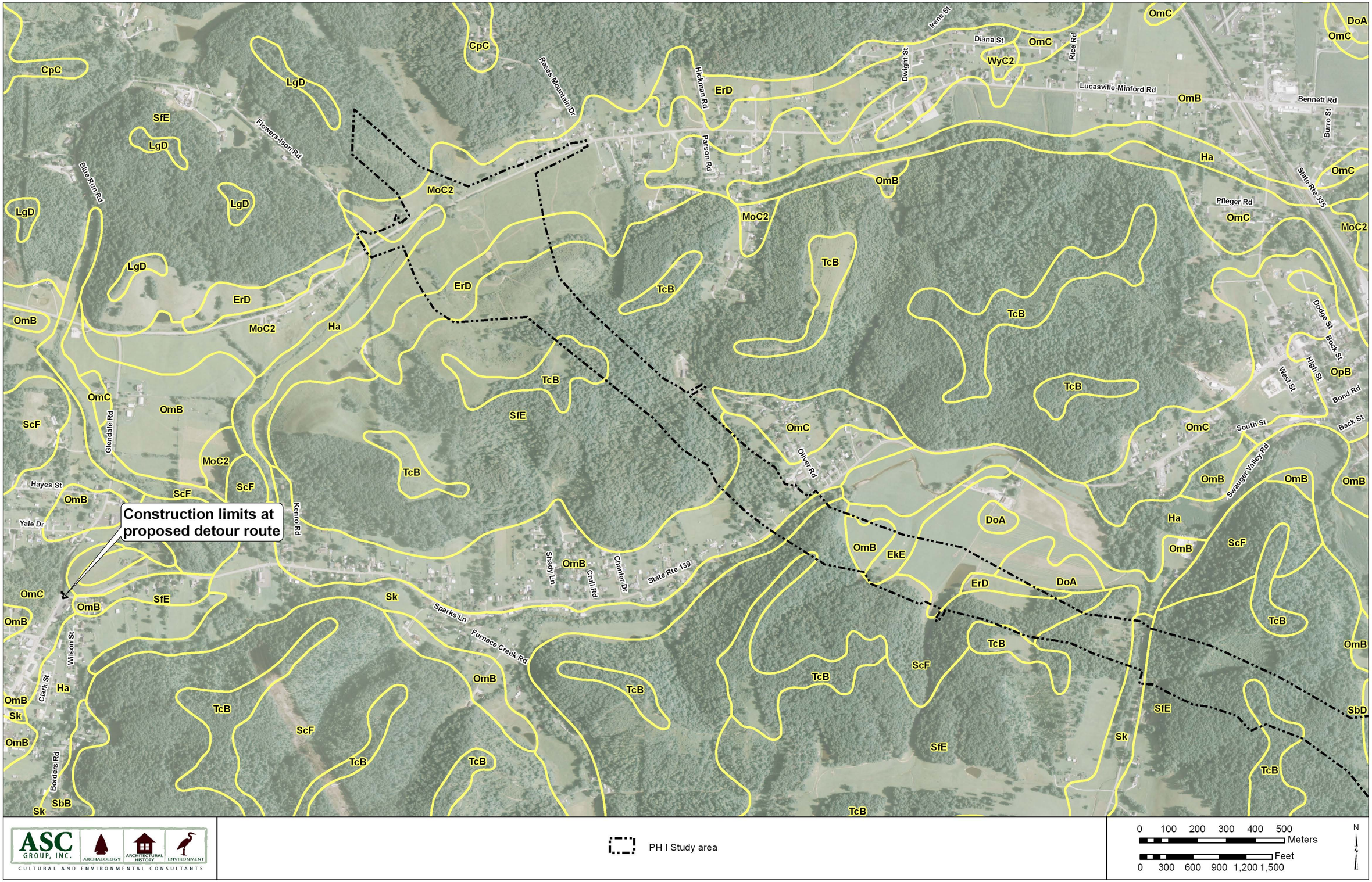


Figure 9. Soils

Figure 9, Sheet 1 of 2

Figure 9. Soils

Figure 9, Sheet 2 of 2

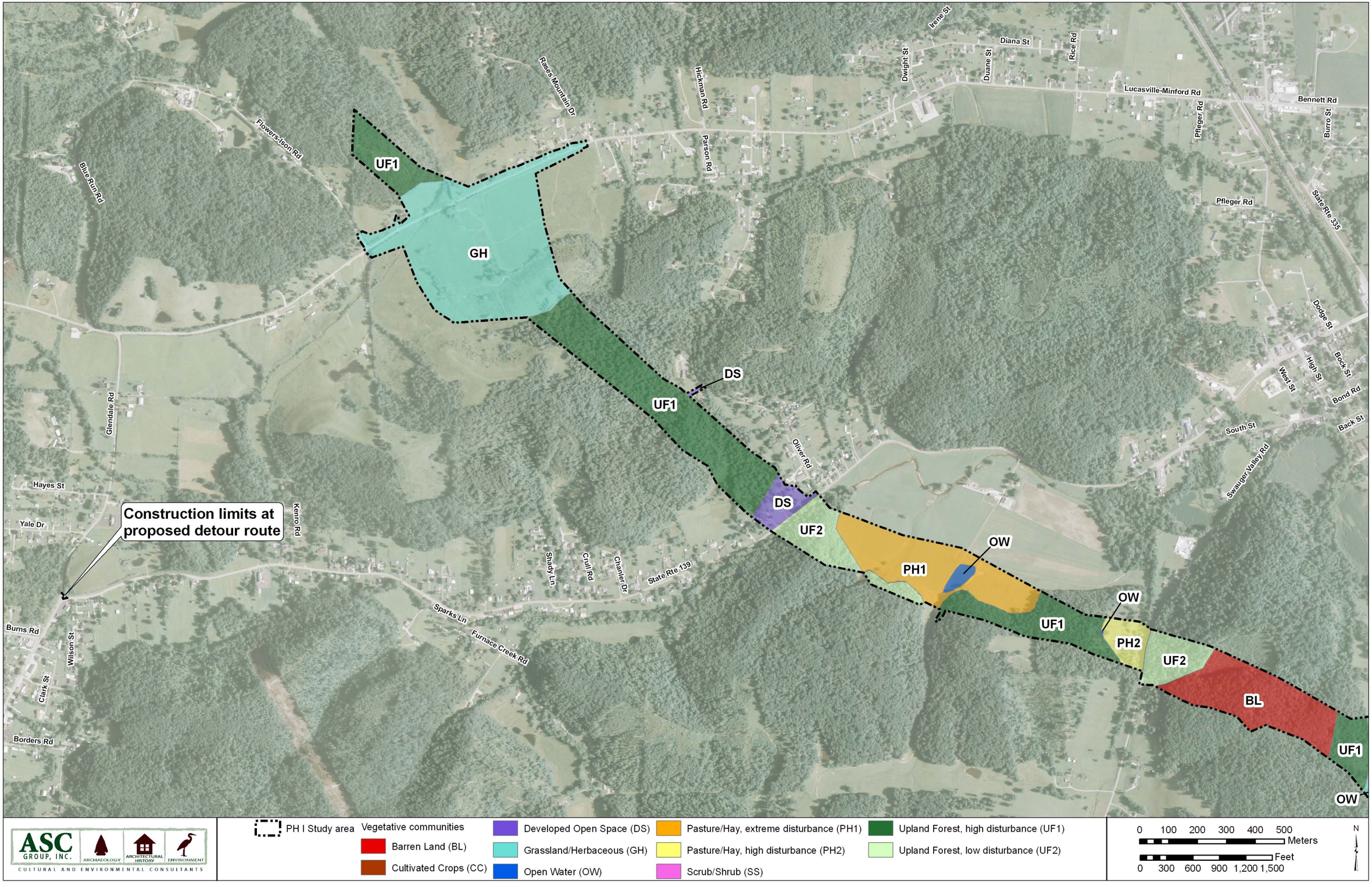


Figure 10. Vegetative communities.

Figure 10, Sheet 1 of 2

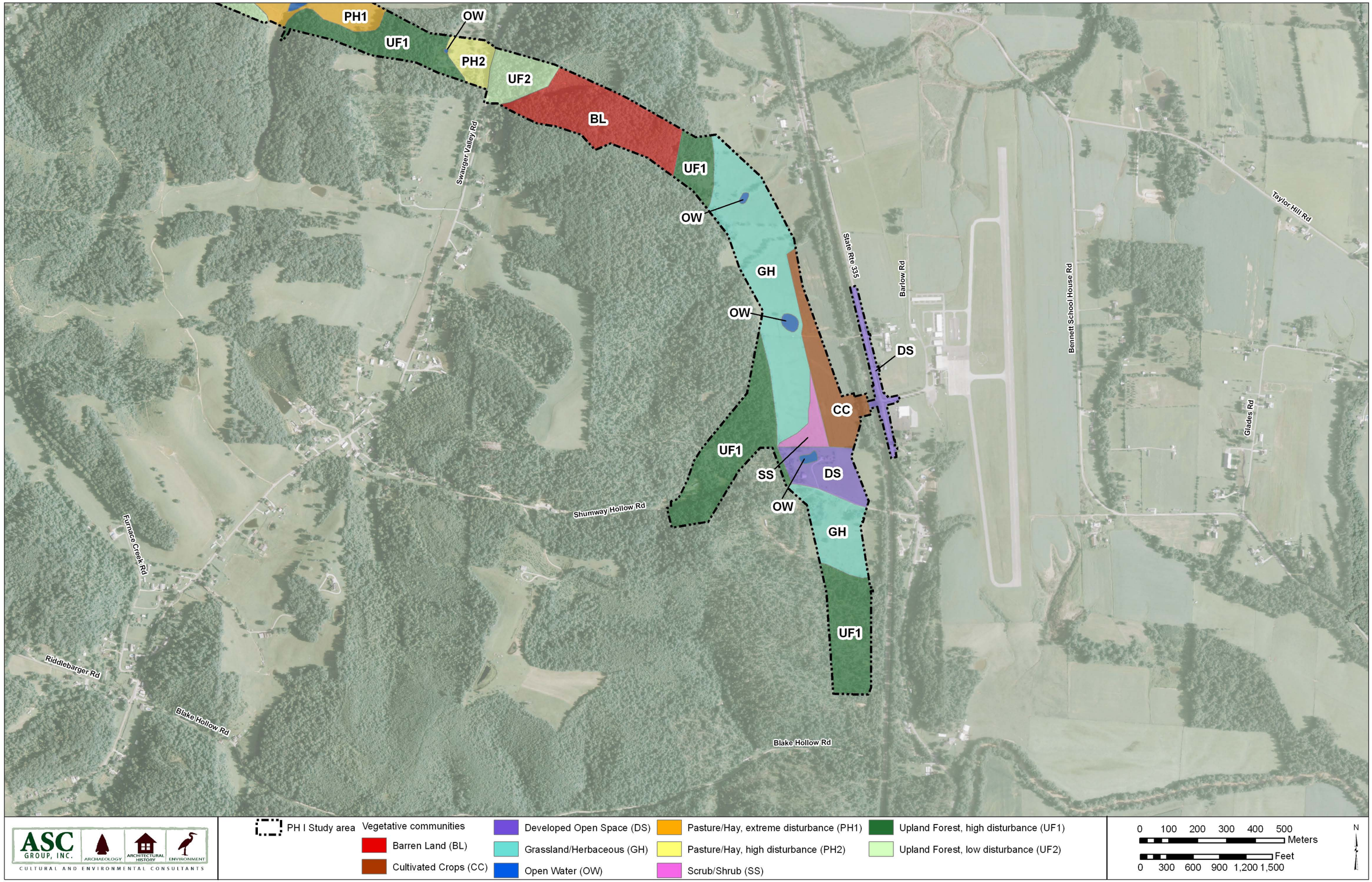


Figure 10. Vegetative communities.

Figure 10, Sheet 2 of 2

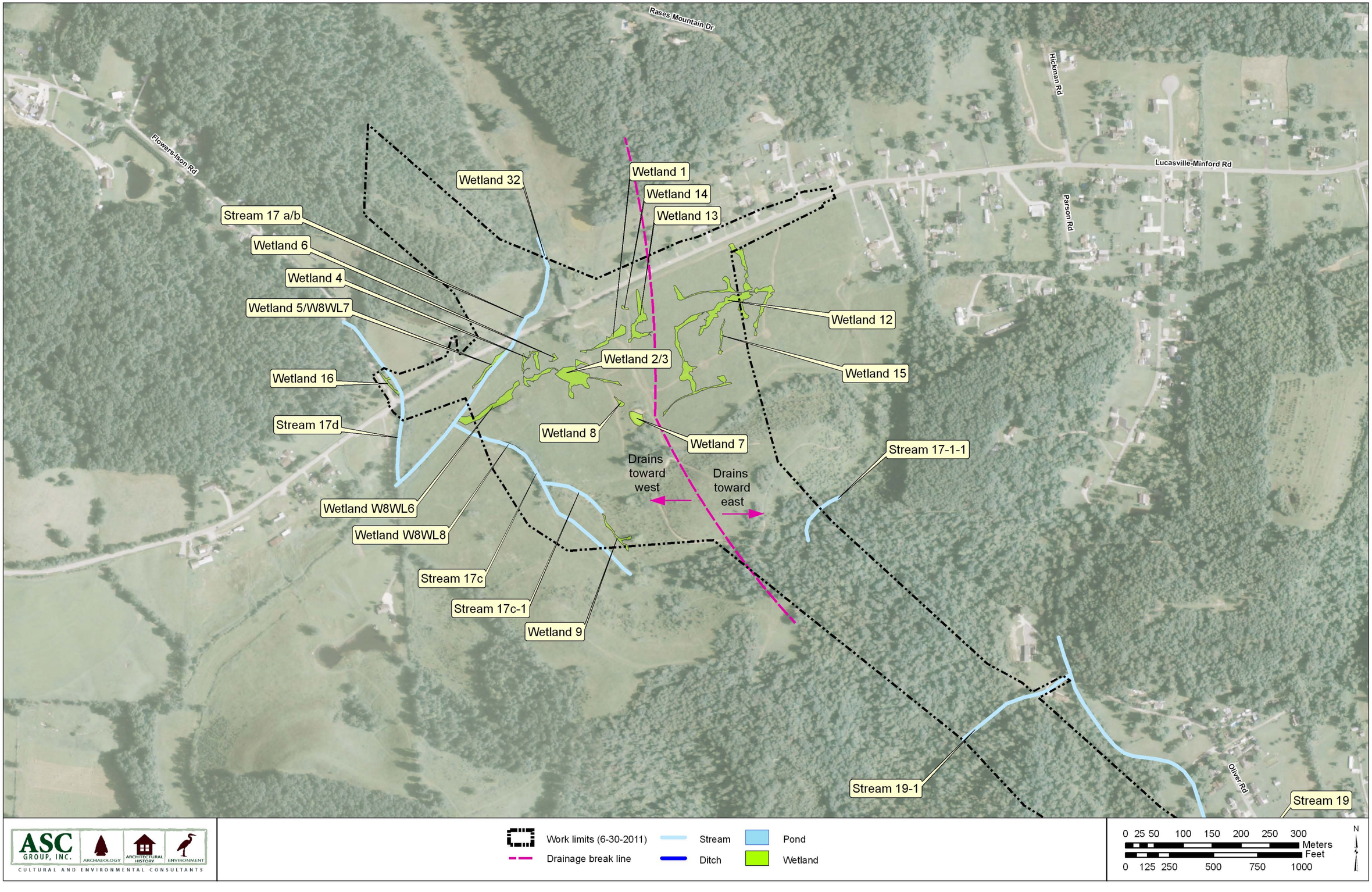
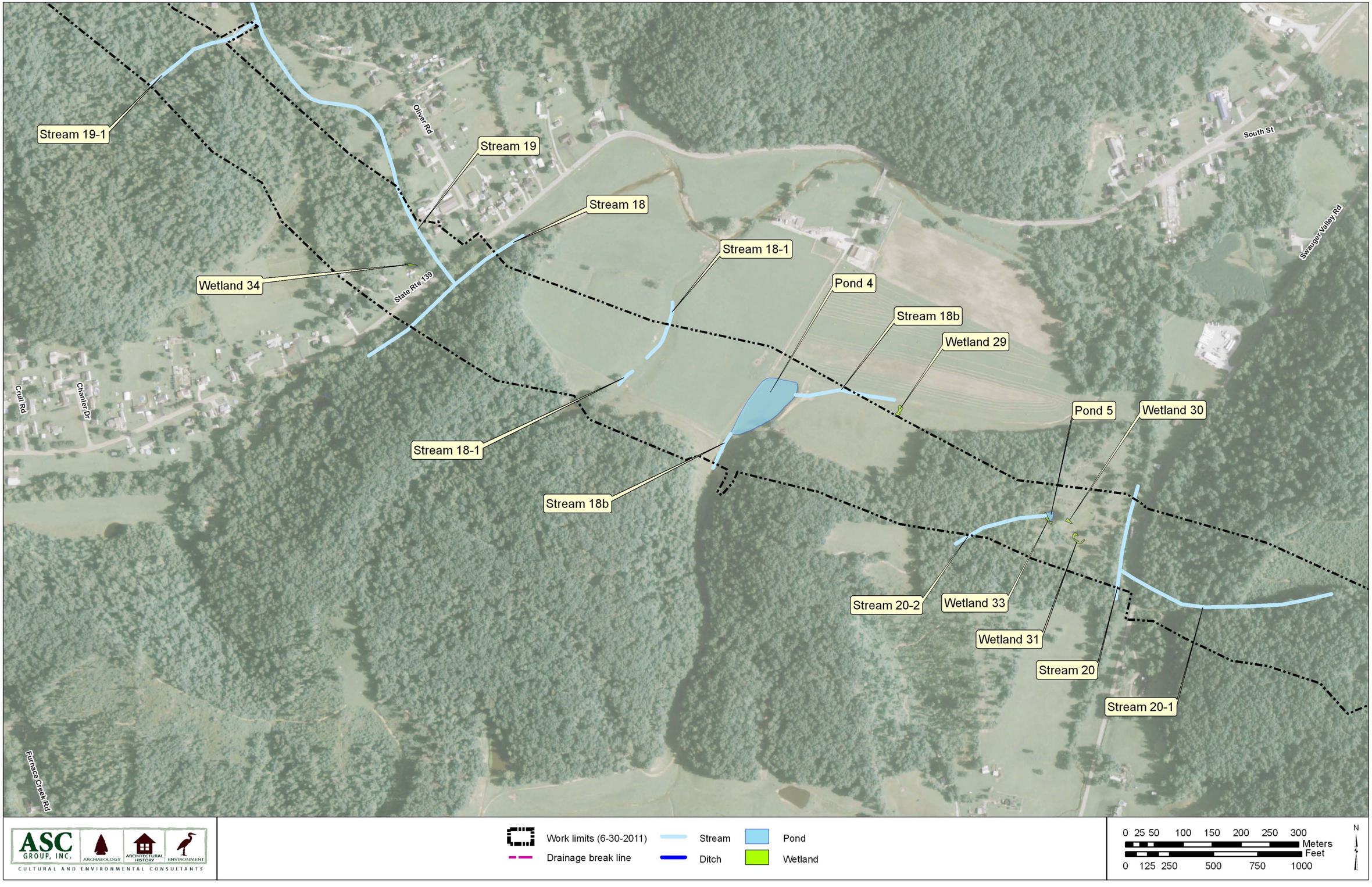


Figure 11. Survey results.



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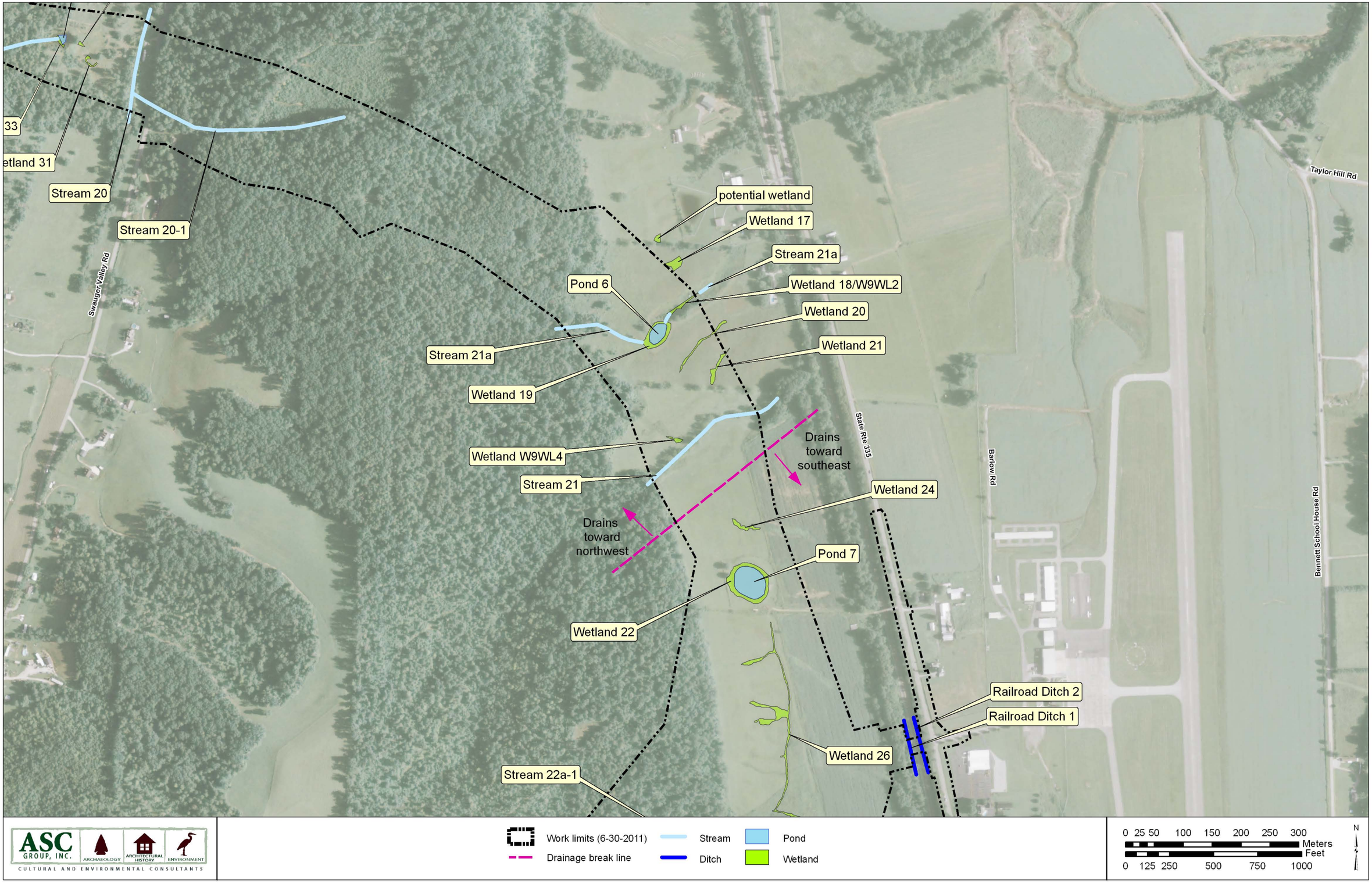

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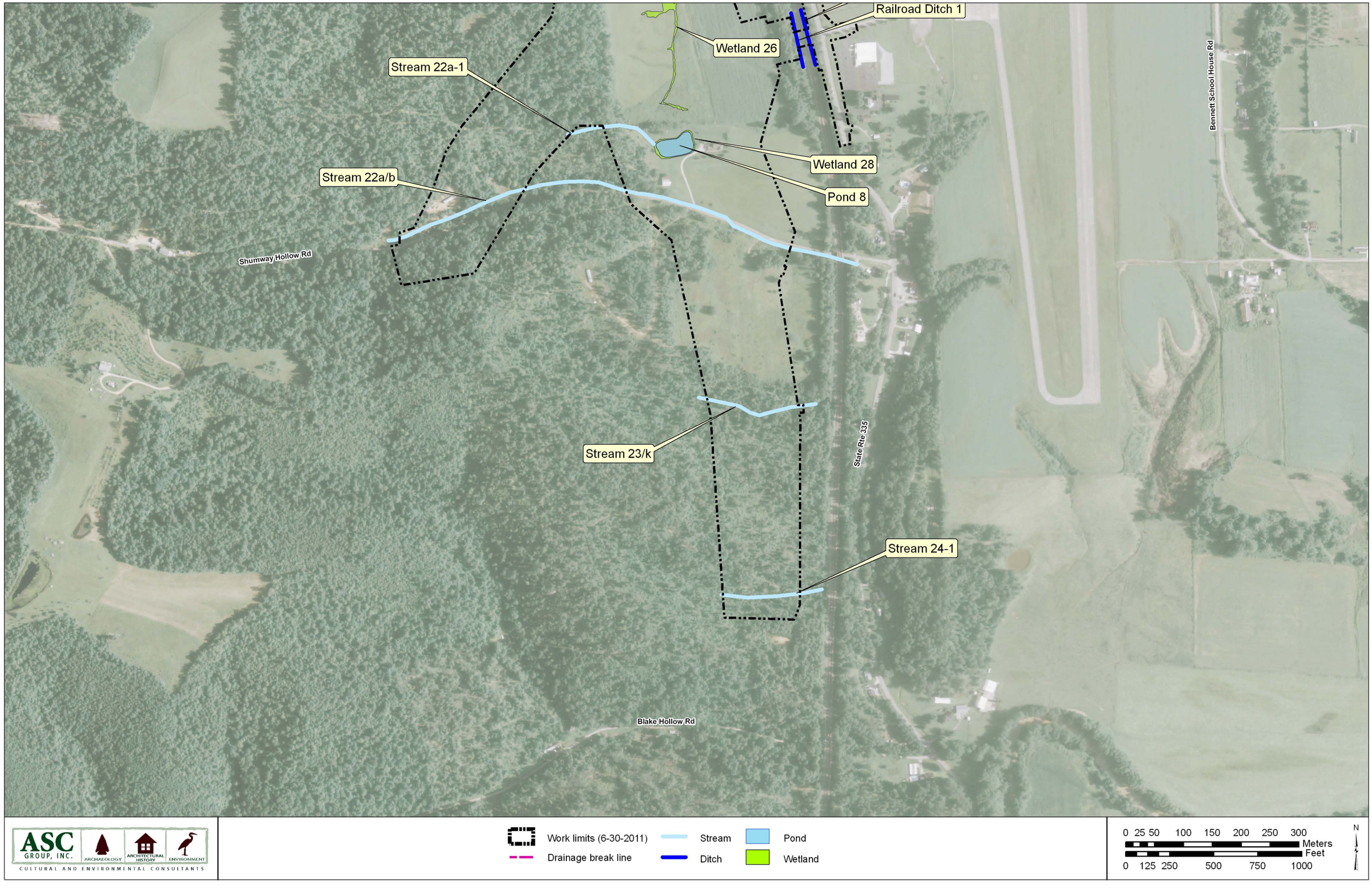

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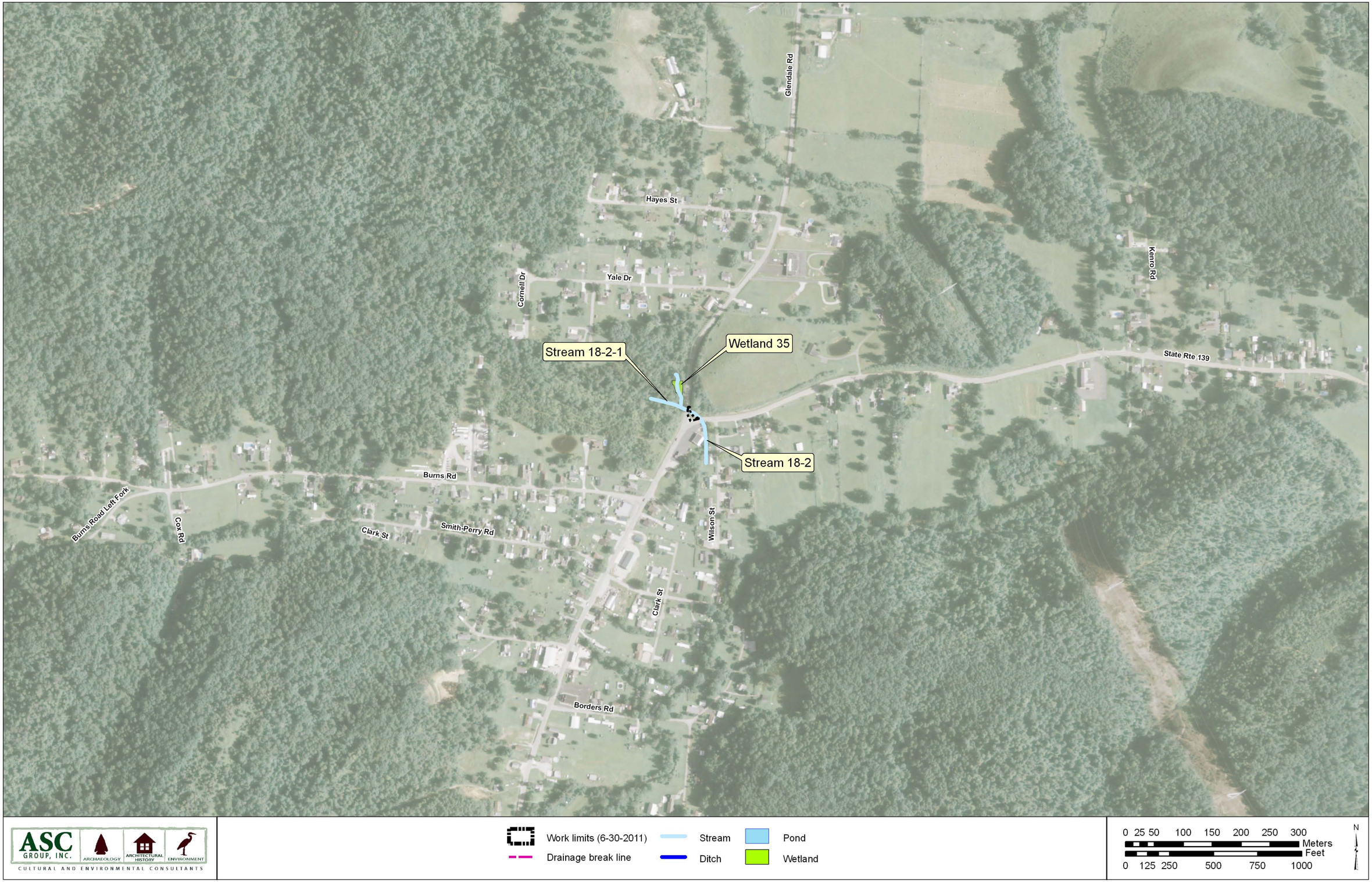


Figure 11. Survey results.

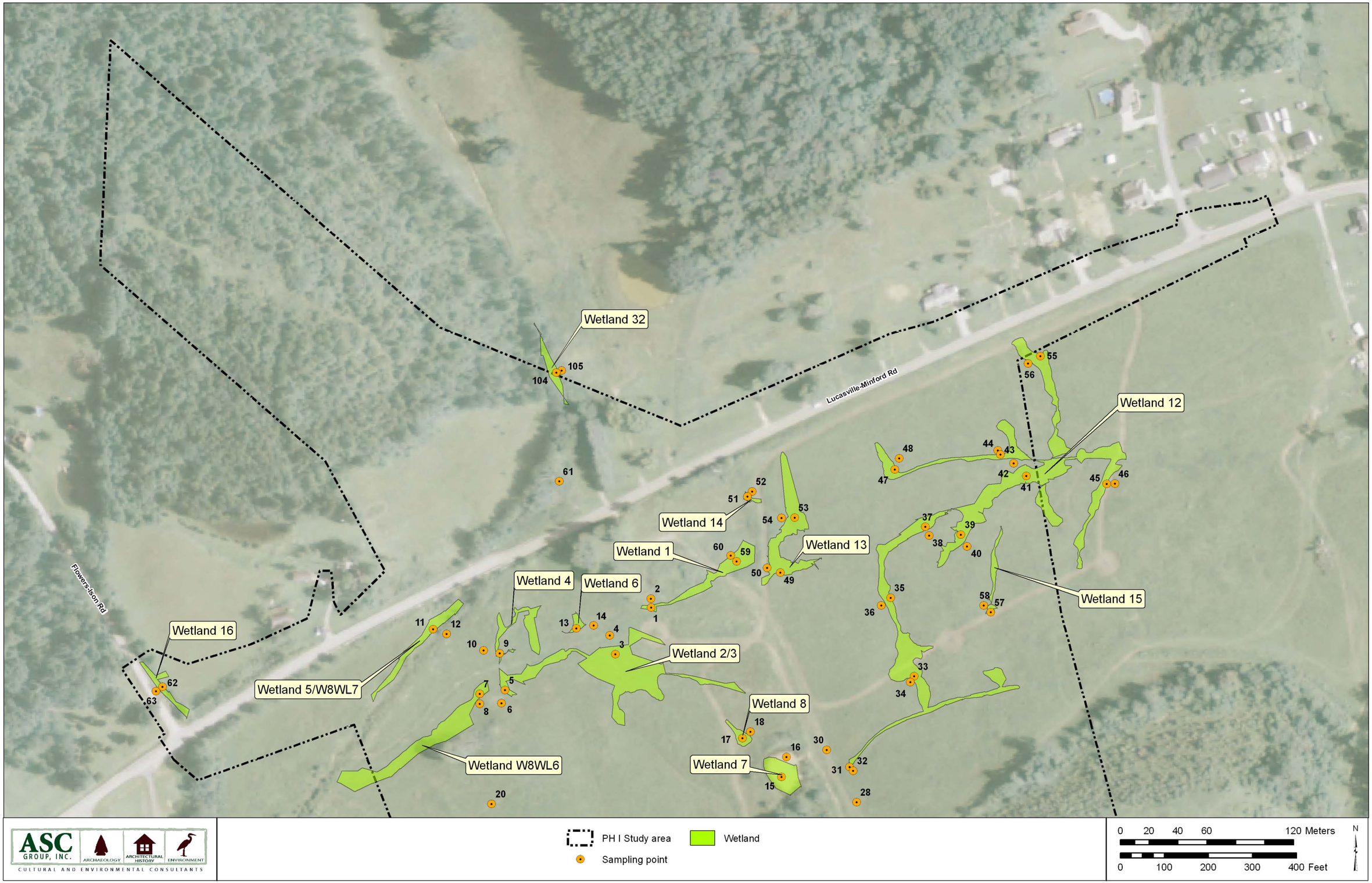
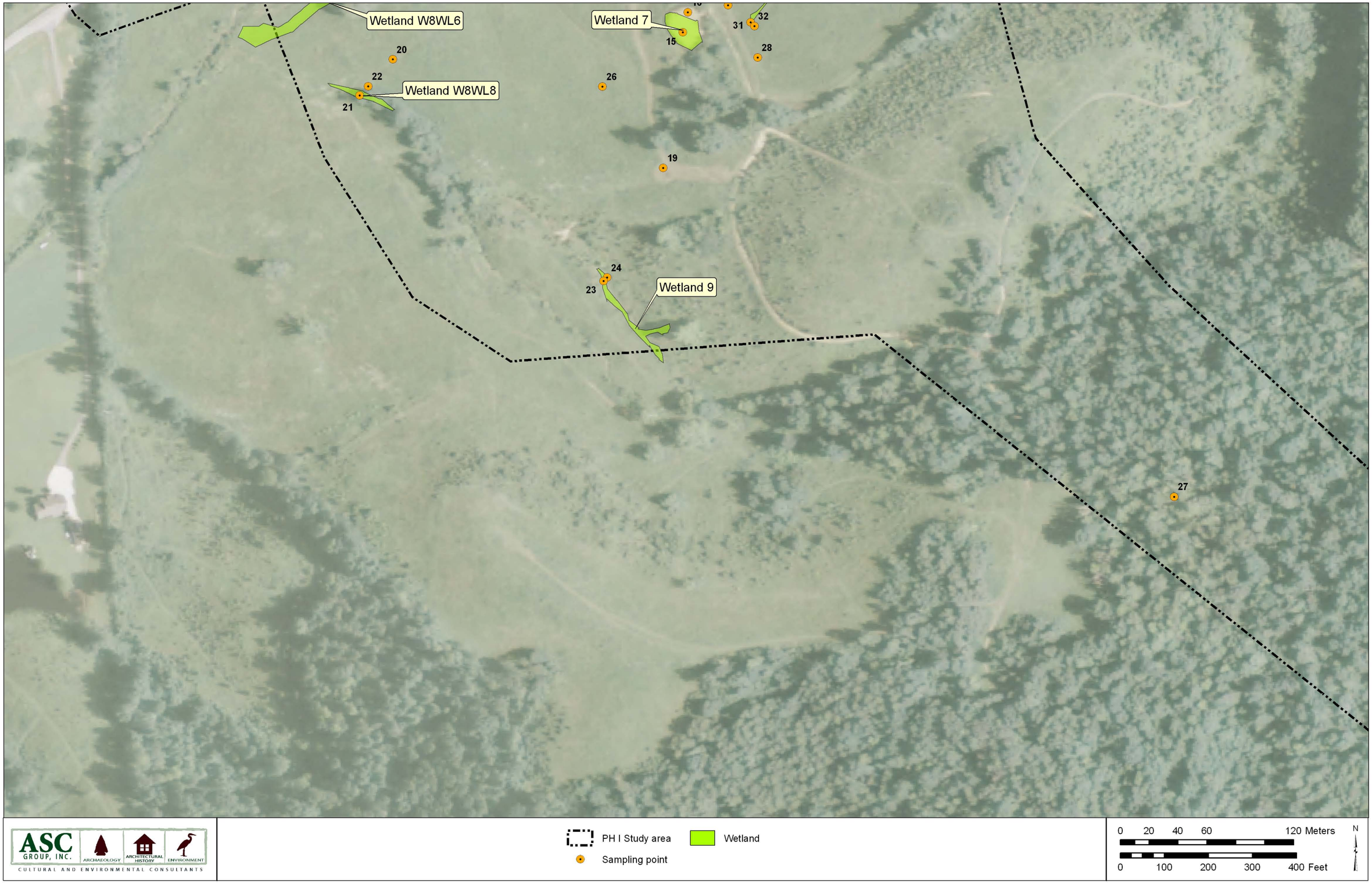


Figure 12. Wetland delineation sampling points.



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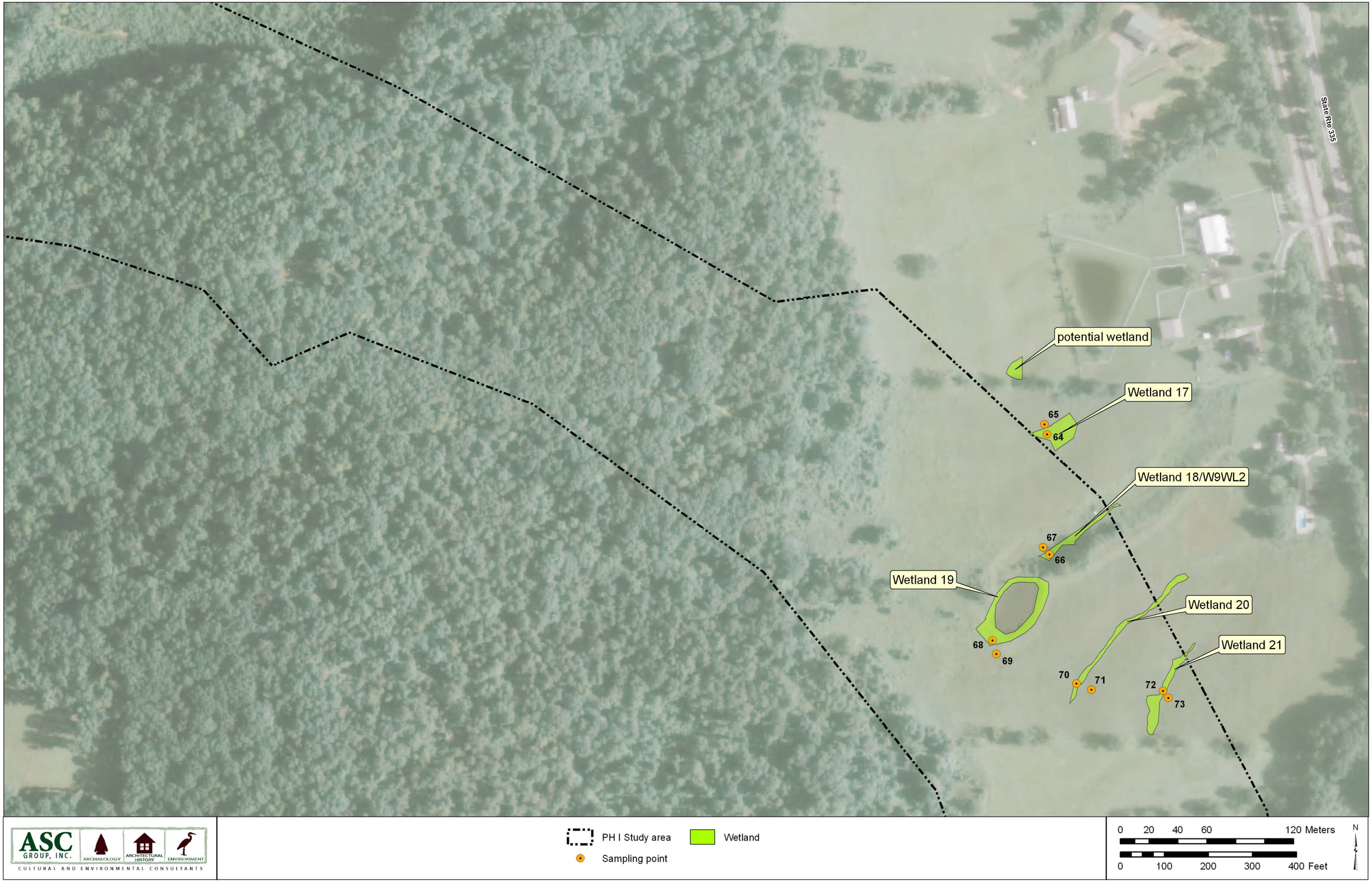

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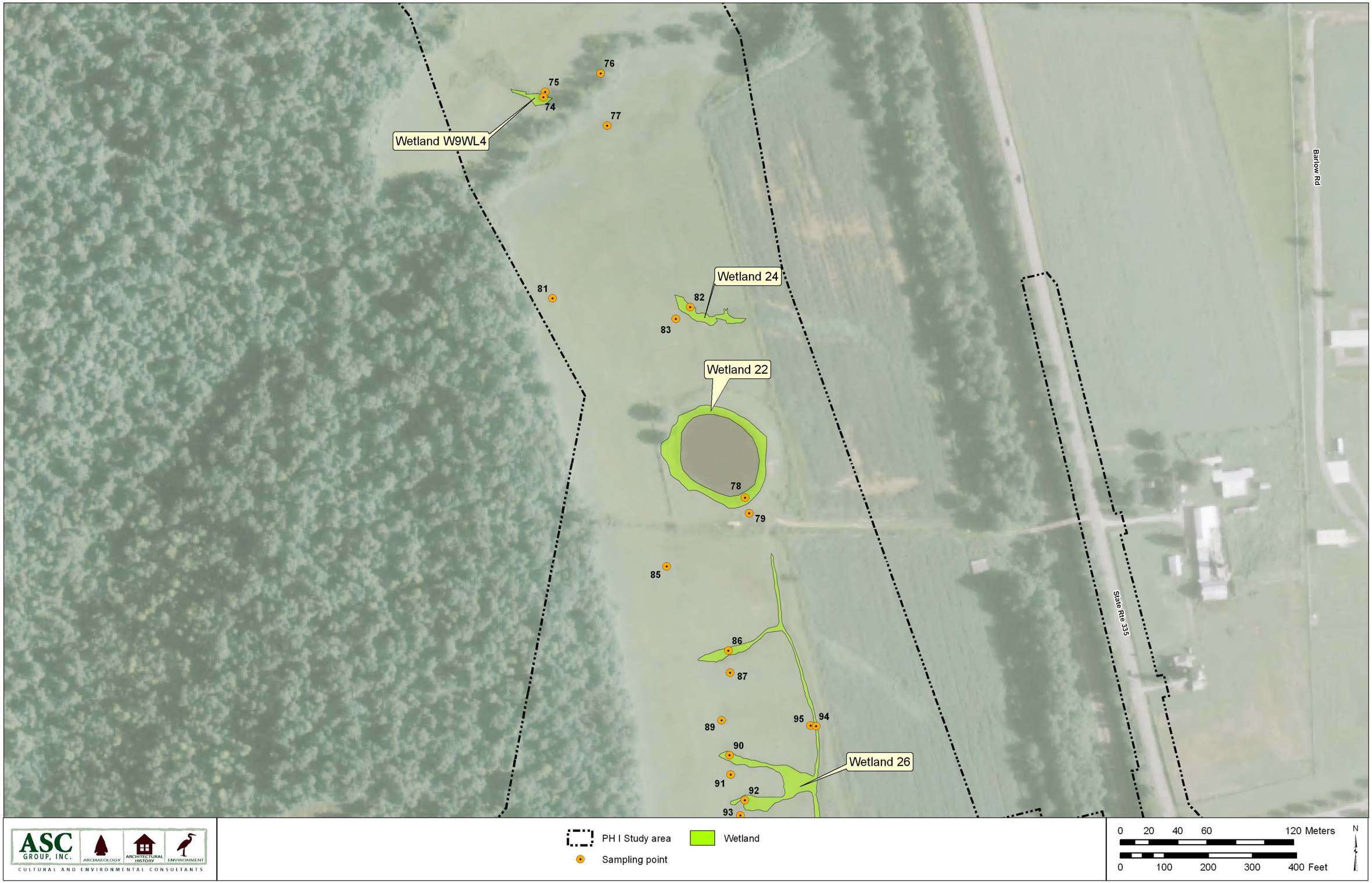

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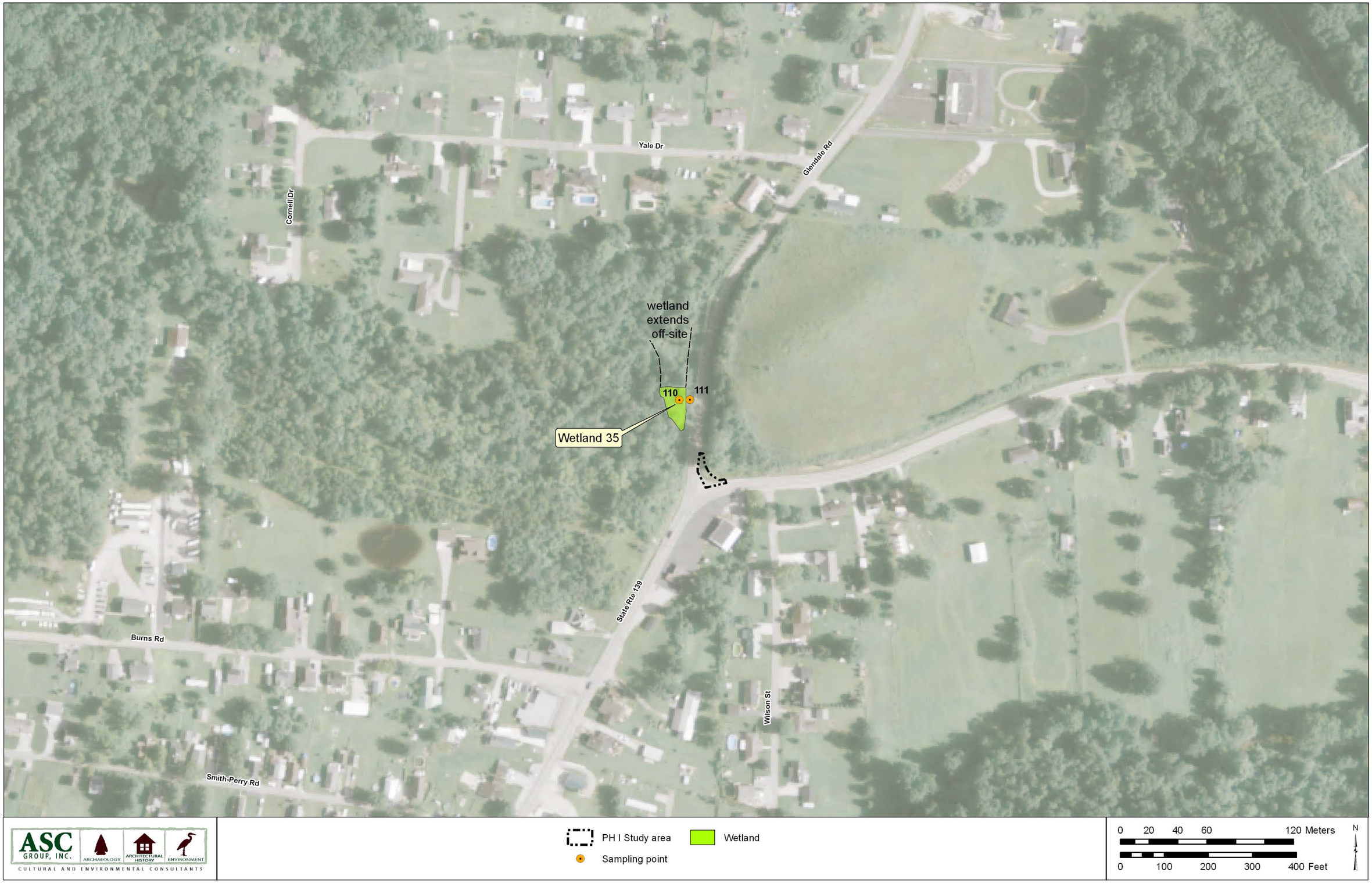
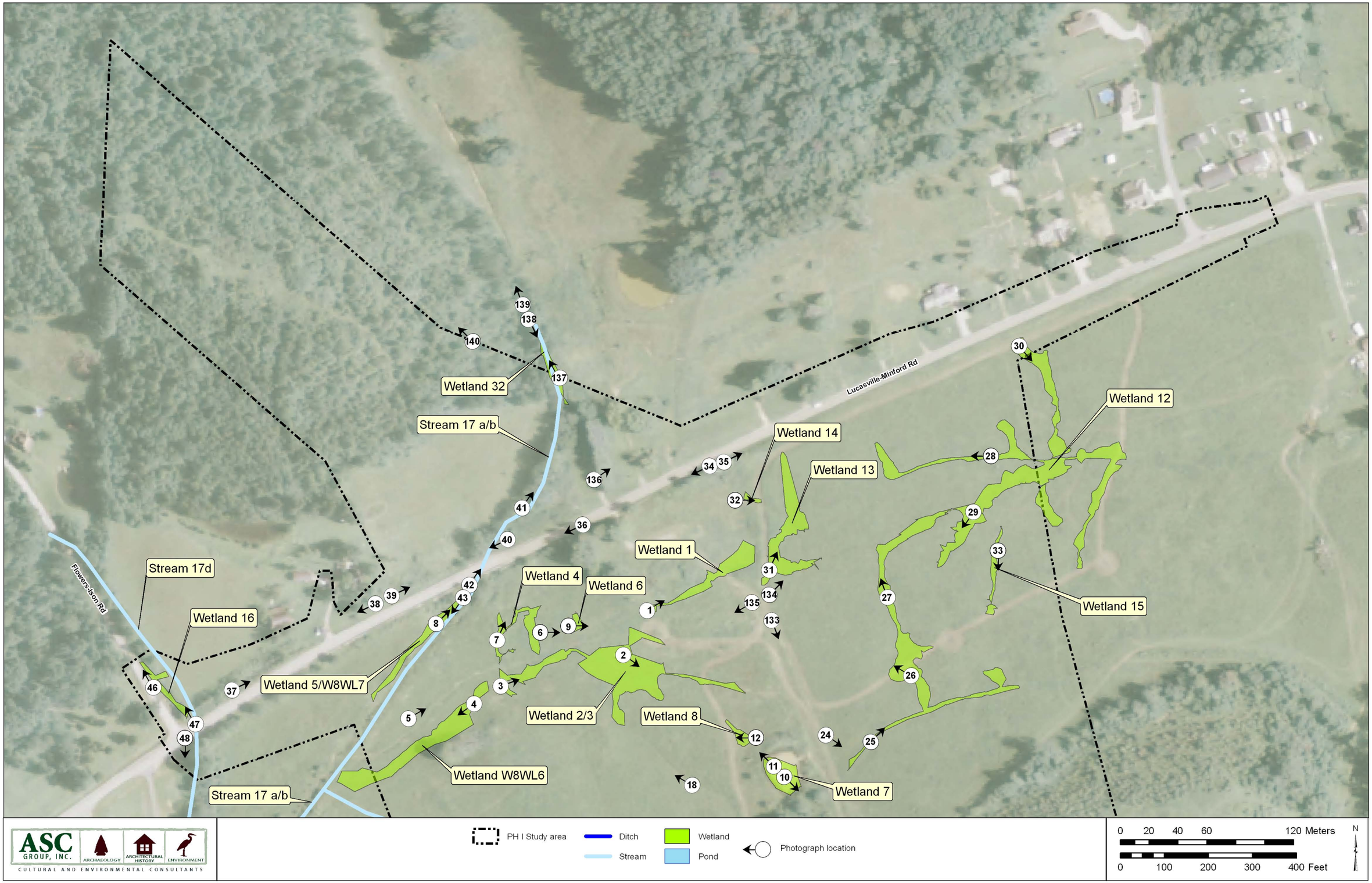


Figure 12. Wetland delineation sampling points.

Appendix 2
Photographs



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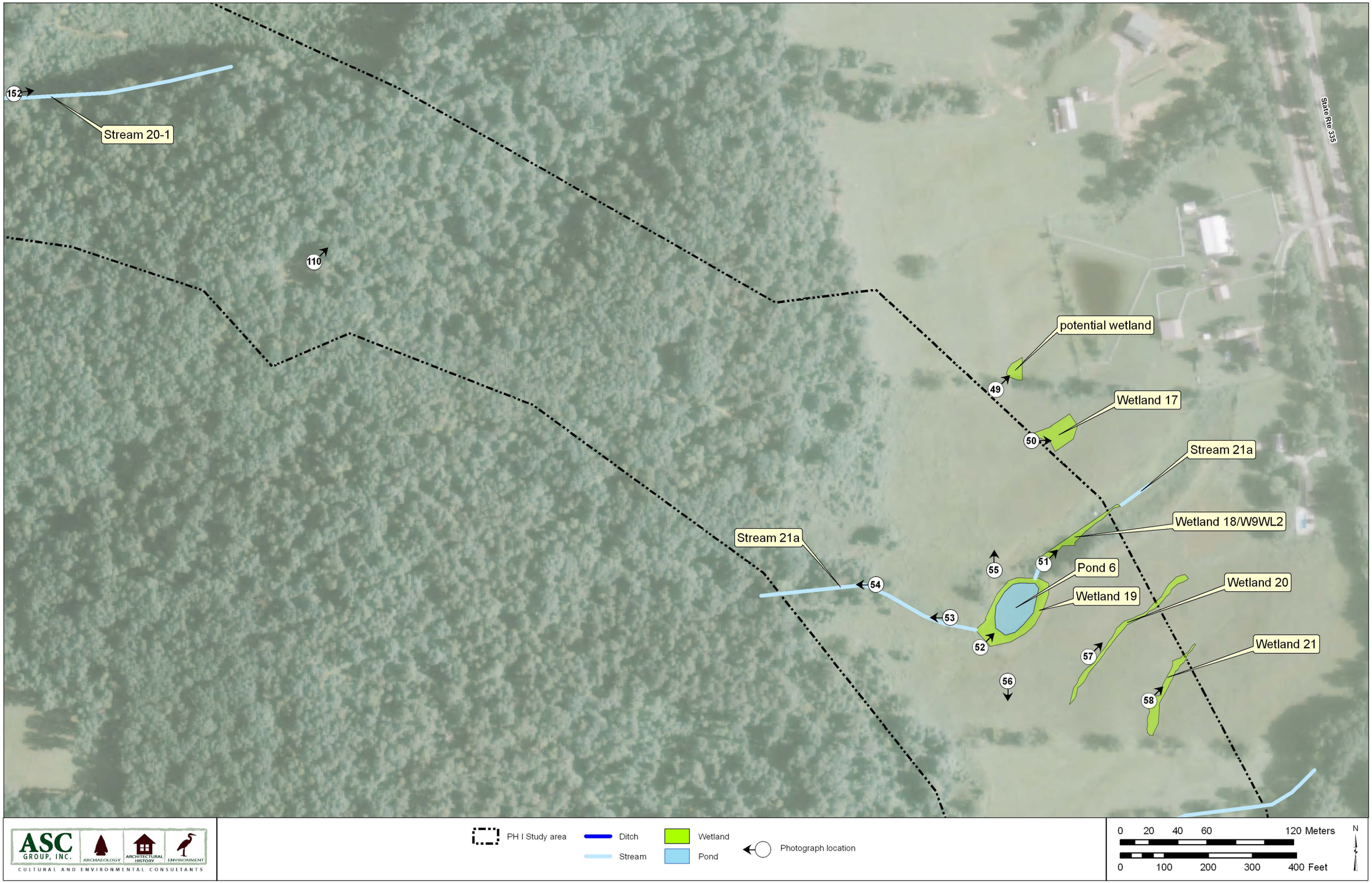

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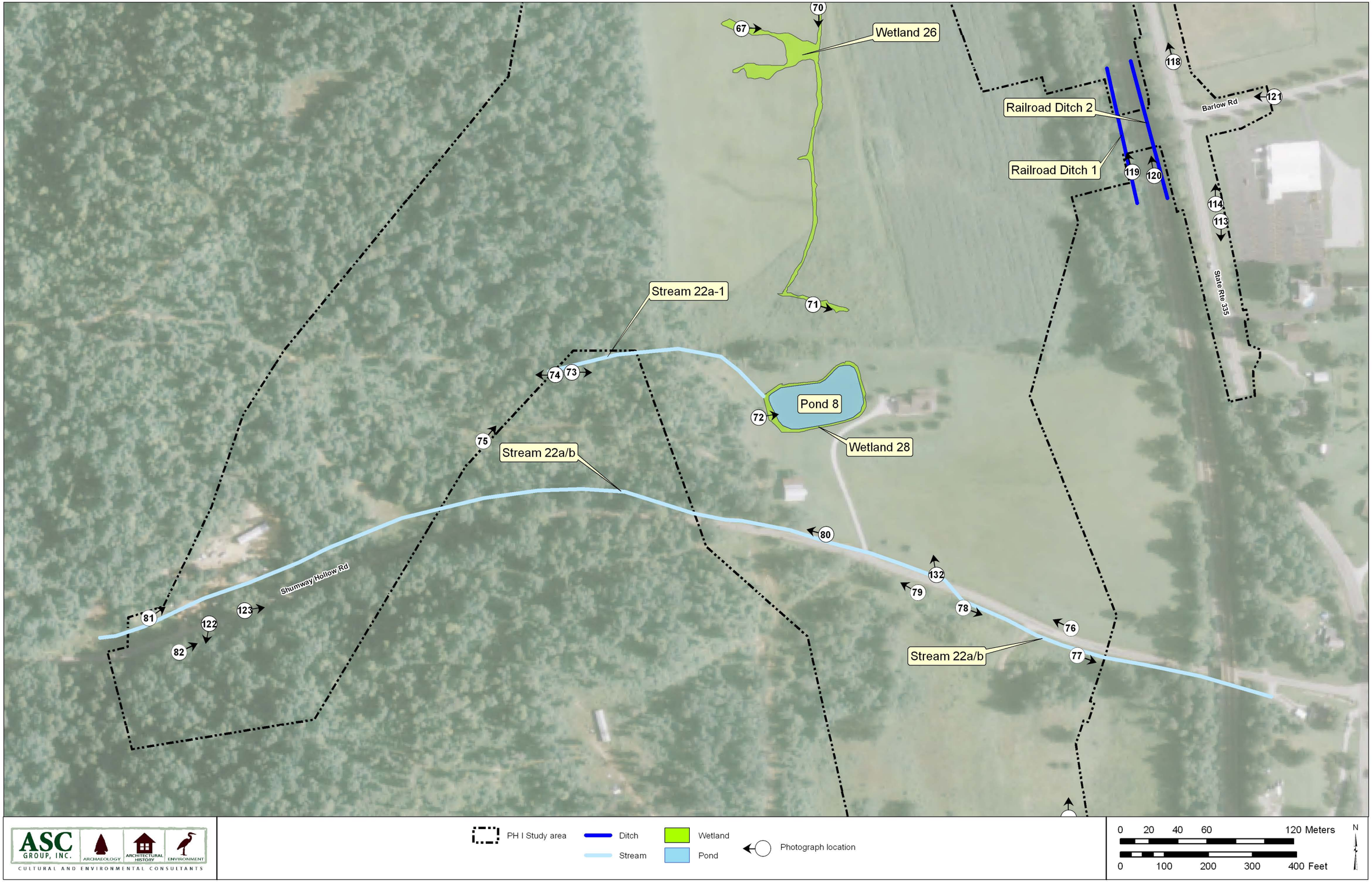

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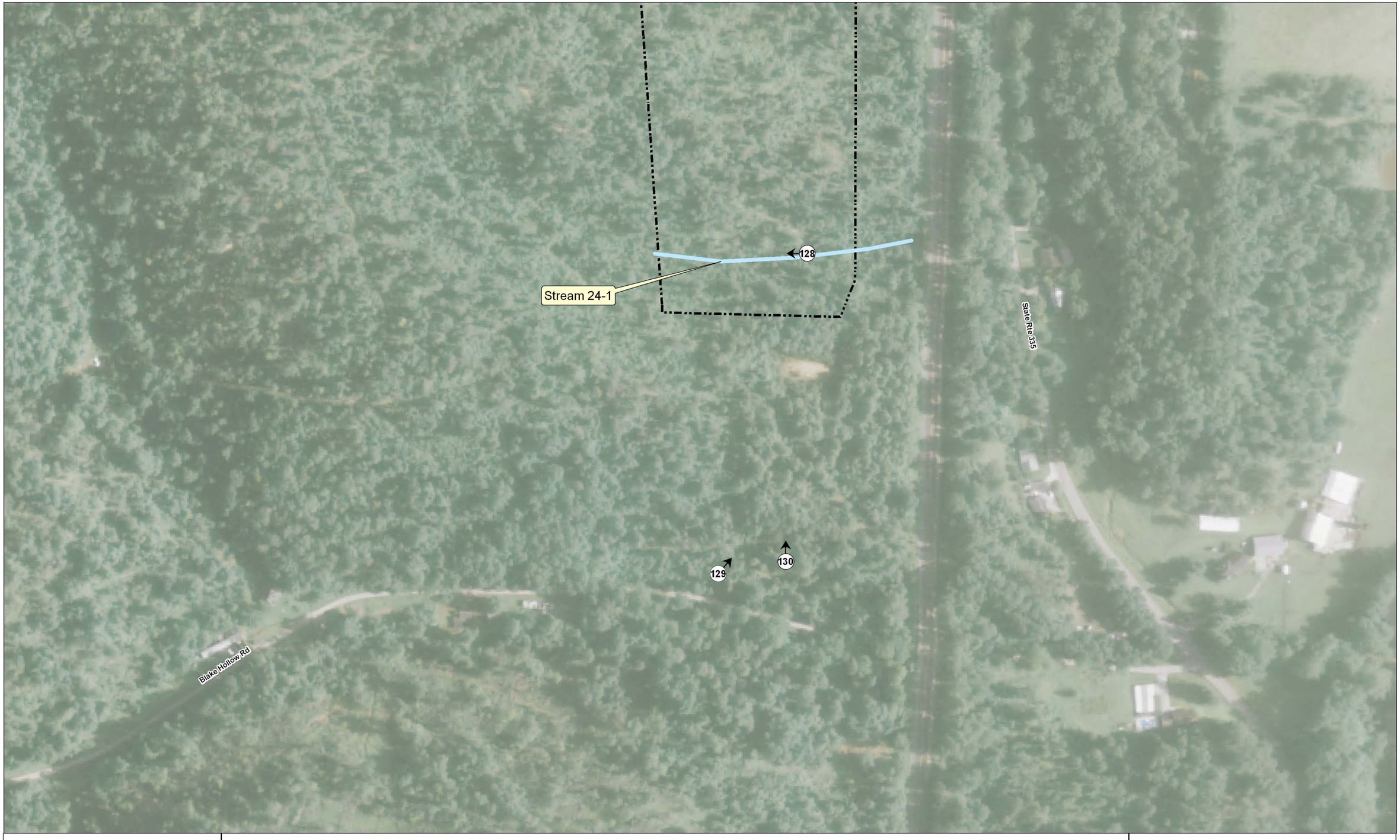

Figure 1. Photograph locations.

Figure 1. Photograph locations.

Photograph 1. View of Wetland 1, facing northeast.

Photograph 2. View of Wetland 2/3, facing southeast.

Photograph 3. View of Wetland 2/3, facing east.

Photograph 4. View of Wetland W8WL6, facing southwest.

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Photograph 6. View of erosional feature (obscured by vegetation), facing east.

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Photograph 20. View of Stream 17-1-1, facing northeast.

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Photograph 23. View of erosional feature, facing north.

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Photograph 29. View of Wetland 12, facing southwest.

Photograph 30. View of Wetland 12, facing southeast.

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Photograph 61. View of Stream 21, facing northeast.

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Photograph 64. View of Wetland 24, facing southeast.

Photograph 65. View of grassland/herbaceous community near upland plot 85, facing north.

Photograph 66. View of Wetland 26, facing east.

Photograph 67. View of Wetland 26, facing east.

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Photograph 70. View of Wetland 26, facing south.

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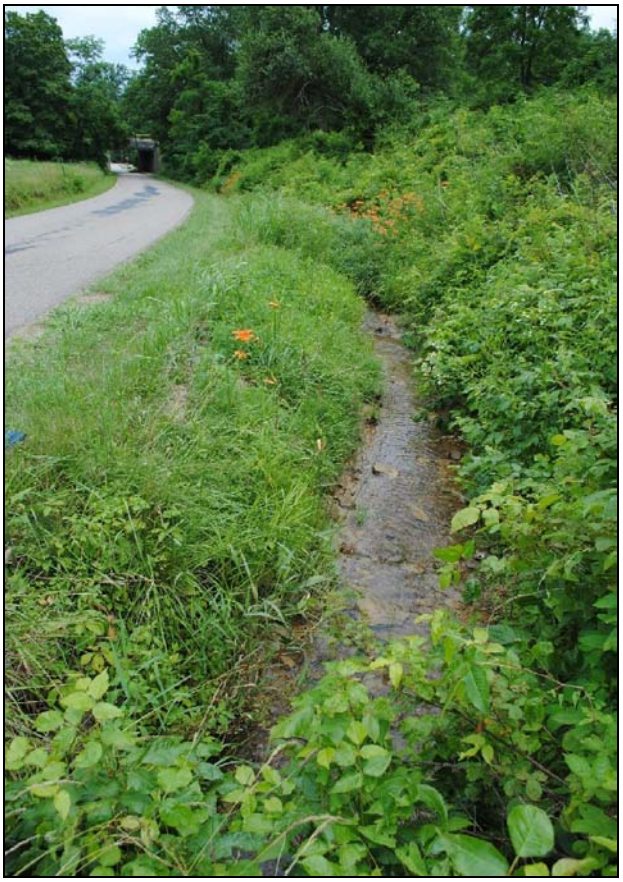
Photograph 76. View of non-relatively permanent roadside drainage along Shumway Hollow Road, facing northwest.

Photograph 77. View of Stream 22a/b along Shumway Hollow Road, facing southeast.



Photograph 78. View of Stream 22a/b along Shumway Hollow Road, facing southeast.

Photograph 79. View of non-relatively permanent roadside drainage, facing west.

Photograph 80. View of Stream 22a/b, facing northwest.

Photograph 81. View of Stream 22a/b along Shumway Hollow Road, facing northeast.

Photograph 82. View of non-relatively permanent roadside drainage, facing northeast.

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Photograph 91. View of stream 18-b, facing southwest.

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Photograph 93. View of Pond 4, facing northeast.

Photograph 94. View of stream 18-b and Pond 4, facing west.

Photograph 95. View of stream 18-b, facing east.

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Photograph 97. View of a cow pasture, facing southeast.

Photograph 98. View of a cow pasture, facing northwest.

Photograph 99. View of a cow pasture, facing southeast.

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Photograph 101. View of a forested area, facing southeast.

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Photograph 107. View of an old-field/pasture area, facing northwest.

Photograph 108. View of Wetland 31, facing northwest.

Photograph 109. View of a forested area, facing southeast.

Photograph 110. View of a recent clear cut, facing northeast.

Photograph 111. View of an agricultural area, facing north.

Photograph 112. View of an agricultural area, facing south.

Photograph 113. View of mowed lawn in the project area, facing south.

Photograph 114. View of mowed lawn in the project area, facing north.

Photograph 115. View of mowed lawn and old-field, facing south.

Photograph 116. View of agricultural area, facing north.

Photograph 117. View of non-relatively permanent roadside drainage, along east side of SR 335, facing north.

Photograph 118. View of non-relatively permanent roadside drainage, along east side of SR 335, facing south.

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Photograph 120. View of Railroad Ditch 2 along east side of tracks, facing south.

Photograph 121. View along Barlow Road, facing west.

Photograph 122. View of wooded area along Shumway Hollow Road, facing south.

Photograph 123. View along Shumway Hollow Road, facing east.

Photograph 124. View of an old-field area, facing north.

Photograph 125. View of an old-field area, facing south.

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Photograph 127. View of Stream 23/k facing east.

Photograph 128. View of Stream 24-1, facing west.

Photograph 129. View of *Viola primulifolia* in the project area.

Photograph 130. View of *Viola primulifolia* in the project area.

Photograph 131. View of a second growth forested area, facing south.

Photograph 132. View of an old-field/residential area, facing north.

Photograph 133. View of old-field area, facing southeast.

Photograph 134. View of old-field area, facing northeast.

Photograph 135. View of old-field area, facing southwest.

Photograph 136. View of old-field area, facing northeast.

Photograph 137. View of Wetland 32, facing northwest.

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Photograph 139. View of Stream 17a/b-1, facing north.

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Photograph 144. View of Stream 18, facing upstream (southwest).

Photograph 145. View of Stream 19, facing downstream (southeast).

Photograph 146. View of Stream 19, facing upstream (north).

Photograph 147. View of Stream 19-1, facing upstream (southwest).

Photograph 148. View of Stream 19-1, facing downstream (east).

Photograph 149. View of Stream 20, facing downstream (north).

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Photograph 156. Juvenile eastern box turtle (*Terrapene carolina carolina*) along Stream 20.

Photograph 157. View of Wetland 34, facing northwest.

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Appendix 3
Data Forms

QHEI and HHEI Evaluation Forms

OhioEPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 22

SITE NAME/LOCATION STREAM 17-1-1

SITE NUMBER _____ RIVER BASIN _____ DRAINAGE AREA (mi²) 0.017 mi²

LENGTH OF STREAM REACH (ft) _____ LAT. 38.8602 LONG. 82.8910 RIVER CODE _____ RIVER MILE _____

DATE 6/15/2011 SCORER R. PAUL COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

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

1. 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.

TYPE		PERCENT	TYPE		PERCENT
☐ ☐	BLDR SLABS [16 pts]		☐ ☐	SILT [3 pts]	
☐ ☐	BOULDER (>256 mm) [16 pts]		☒ ☐	LEAF PACK/WOODY DEBRIS [3 pts]	20
☐ ☐	BEDROCK [16 pt]		☐ ☐	FINE DETRITUS [3 pts]	
☐ ☐	COBBLE (65-256 mm) [12 pts]	8	☐ ☒	CLAY or HARDPAN [0 pt]	60
☐ ☐	GRAVEL (2-64 mm) [9 pts]	12	☐ ☐	MUCK [0 pts]	
☐ ☐	SAND (<2 mm) [6 pts]		☐ ☐	ARTIFICIAL [3 pts]	

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 8 (A) 3

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:

(B) 4

TOTAL NUMBER OF SUBSTRATE TYPES:

HHEI Metric Points

Substrate Max = 40: 7

A + B

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):

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

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): 0

Pool Depth Max = 30: 0

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

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

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters) 1.2

Bankfull Width Max=30: 15

This information must also be completed

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

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

COMMENTS _____

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

- ☐ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☒ Dry channel, no water (Ephemeral)

COMMENTS _____

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

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

STREAM GRADIENT ESTIMATE

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

October 24, 2002 Revision

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

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

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: SWEET RUN Distance from Evaluated Stream 0.30 miles

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: New Boston NRCS Soil Map Page: 22 NRCS Soil Map Stream Order 1°

County: Scioto Township / City: Madison TWP

MISCELLANEOUS

Base Flow Conditions? (Y/N): N Date of last precipitation: 6/15/2011 Quantity: 0.10 in

Photograph Information: SEE ESR Report for Photographs

Elevated Turbidity? (Y/N): N Canopy (% open): 20%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) N/A Dissolved Oxygen (mg/l) N/A pH (S.U.) N/A Conductivity (µmhos/cm) N/A

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

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

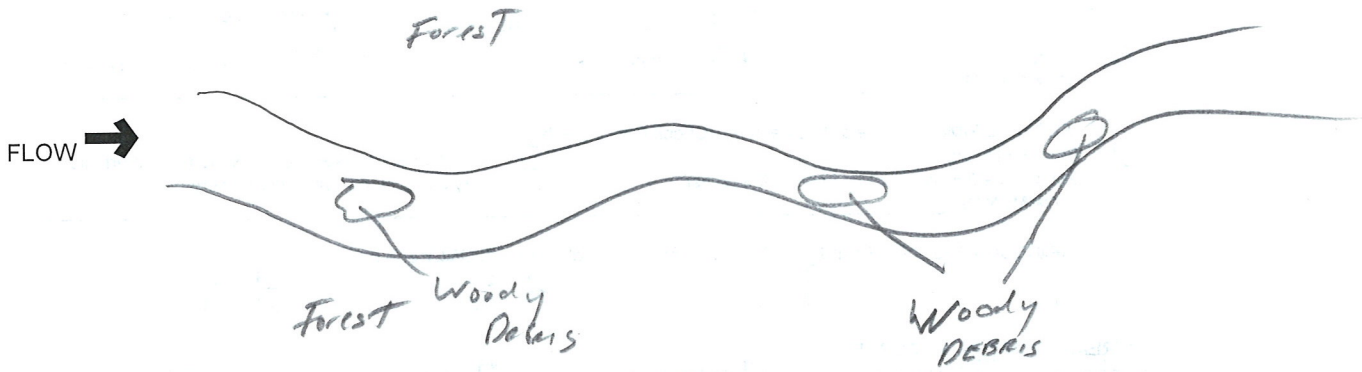
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

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

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



Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 55

SITE NAME/LOCATION STREAM 17A/13

SITE NUMBER _____ RIVER BASIN _____ DRAINAGE AREA (mi²) 0.54

LENGTH OF STREAM REACH (ft) 200 LAT. 38.8614 LONG. 82.8984 RIVER CODE _____ RIVER MILE _____

DATE 6/21/2011 SCORER J. Earley COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

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

1. 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.

TYPE		PERCENT	TYPE		PERCENT
☐☐	BLDR SLABS [16 pts]	5%	☐☐	SILT [3 pt]	10%
☐☐	BOULDER (>256 mm) [16 pts]		☐☐	LEAF PACK/WOODY DEBRIS [3 pts]	5%
☐☐	BEDROCK [16 pt]		☐☐	FINE DETRITUS [3 pts]	
☐☐	COBBLE (65-256 mm) [12 pts]	20%	☒☐	CLAY or HARDPAN [0 pt]	30%
☐☒	GRAVEL (2-64 mm) [9 pts]	25%	☐☐	MUCK [0 pts]	
☐☐	SAND (<2 mm) [6 pts]		☐☐	ARTIFICIAL [3 pts]	5%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock _____ (A) 9

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:

(B) 6

TOTAL NUMBER OF SUBSTRATE TYPES:

HHEI Metric Points

Substrate Max = 40: 15

A + B

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):

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

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): 35

Pool Depth Max = 30: 20

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

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

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters): 1.55m

Bankfull Width Max=30: 20

This information must also be completed

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

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

COMMENTS _____

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

- ☒ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS _____

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

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

STREAM GRADIENT ESTIMATE

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

October 24, 2002 Revision

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

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

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: Long Run Distance from Evaluated Stream 1.12 mi

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: New Boston NRCS Soil Map Page: 22 NRCS Soil Map Stream Order 3°

County: Scioto Township / City: Madison Twp

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 6/20/2011 Quantity: 0.66 in

Photograph Information: SEE ESR Report

Elevated Turbidity? (Y/N): Y Canopy (% open): 50%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) 18.7 Dissolved Oxygen (mg/l) 6.45 pH (S.U.) 7.34 Conductivity (µmhos/cm) 0.181

Is the sampling reach representative of the stream (Y/N) Y If not, please explain: Sampled between original sites 17a & 17b to create STREAM 17a/b

Additional comments/description of pollution impacts: Located in Old Field / Pasture, subject to Road Run off

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

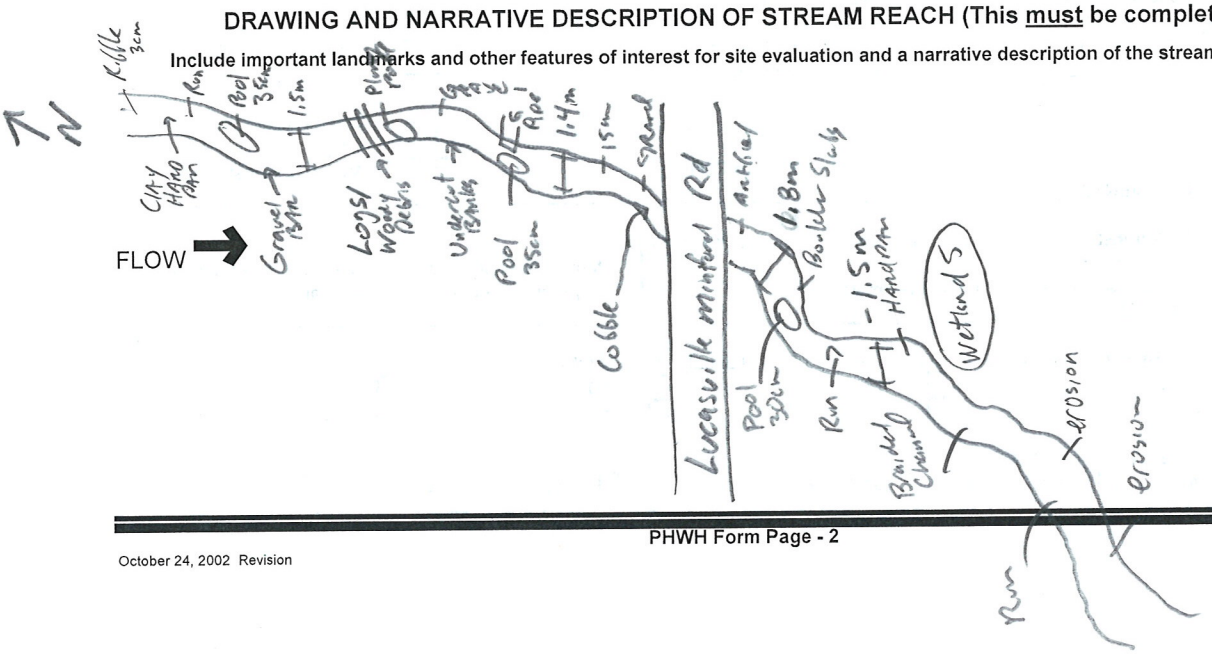
Fish Observed? (Y/N) Y Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) Y Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) Y Voucher? (Y/N) N

Comments Regarding Biology: _____

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

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



Ohio EPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 47

SITE NAME/LOCATION STREAM 17 C

SITE NUMBER _____ RIVER BASIN _____ DRAINAGE AREA (mi²) 0.047

LENGTH OF STREAM REACH (ft) 200 LAT. 38.8613 LONG. 82.8964 RIVER CODE _____ RIVER MILE _____

DATE 6/15/2011 SCORER J. Earley COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

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

1. 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.

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS [16 pts]		☐	SILT [3 pt]	20%
☐	BOULDER (>256 mm) [16 pts]		☐	LEAF PACK/WOODY DEBRIS [3 pts]	10%
☐	BEDROCK [16 pt]		☐	FINE DETRITUS [3 pts]	
☐	COBBLE (65-256 mm) [12 pts]	10%	☐	CLAY or HARDPAN [0 pt]	10%
☒	GRAVEL (2-64 mm) [9 pts]	50%	☐	MUCK [0 pts]	
☐	SAND (<2 mm) [6 pts]		☐	ARTIFICIAL [3 pts]	

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 10% (A) 12 (B) 5

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

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):

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

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): 20

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

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

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters) 0.97

HHEI Metric Points

	Max	Score
Substrate	40	17
A + B		
Pool Depth	30	25
Bankfull Width	30	5

This information must also be completed

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

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

COMMENTS _____

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

- ☐ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☒ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS _____

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

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

STREAM GRADIENT ESTIMATE

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

October 24, 2002 Revision

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

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

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: Long Run Distance from Evaluated Stream 1.23 mi

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: New Boston NRCS Soil Map Page: 22 NRCS Soil Map Stream Order 2°

County: Scioto Township / City: Madison TWP

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 6/15/2011 Quantity: 0.10"

Photograph Information: SEE ESR

Elevated Turbidity? (Y/N): Y Canopy (% open): 20

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) 15.7 Dissolved Oxygen (mg/l) 7.43 pH (S.U.) 7.02 Conductivity (µmhos/cm) 0.167

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

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

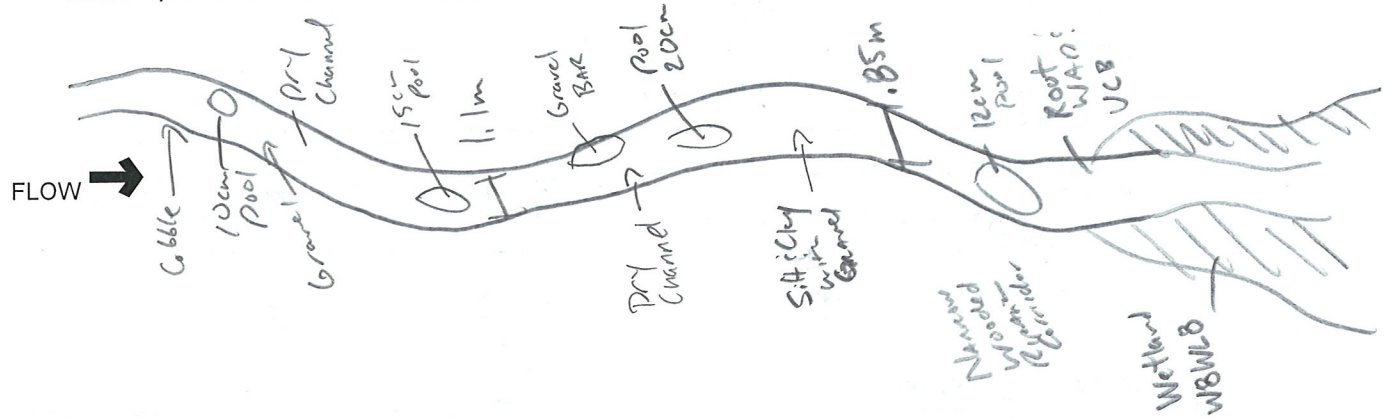
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

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

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



Ohio EPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 43

SITE NAME/LOCATION 17c-1 - Trib to 17c

SITE NUMBER _____ RIVER BASIN _____ DRAINAGE AREA (mi²) 0.01

LENGTH OF STREAM REACH (ft) 200 LAT. 38.8606 LONG. -82.8952 RIVER CODE _____ RIVER MILE _____

DATE 6/15/2011 SCORER Jason Evarley COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

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

1. 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.

TYPE		PERCENT	TYPE		PERCENT
☐☐	BLDR SLABS [16 pts]		☐☐	SILT [3 pt]	10%
☐☐	BOULDER (>256 mm) [16 pts]		☐☐	LEAF PACK/WOODY DEBRIS [3 pts]	
☐☐	BEDROCK [16 pt]		☐☐	FINE DETRITUS [3 pts]	
☐☐	COBBLE (65-256 mm) [12 pts]	10%	☒☐	CLAY or HARDPAN [0 pt]	65%
☐☒	GRAVEL (2-64 mm) [9 pts]	15%	☐☐	MUCK [0 pts]	
☐☐	SAND (<2 mm) [6 pts]		☐☐	ARTIFICIAL [3 pts]	

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 10%

(A) 9 **SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:**

(B) 4 **TOTAL NUMBER OF SUBSTRATE TYPES:**

HHEI Metric Points

Substrate Max = 40: 13

A + B

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):

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

17 **MAXIMUM POOL DEPTH (centimeters):**

Pool Depth Max = 30: 25

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

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

.6 **AVERAGE BANKFULL WIDTH (meters)**

Bankfull Width Max=30: 5

This information must also be completed

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

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

COMMENTS _____

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

- ☐ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☒ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS _____

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

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

STREAM GRADIENT ESTIMATE

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

October 24, 2002 Revision

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

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

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: Long Run Distance from Evaluated Stream 1.23 mi

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: New Boston NRCS Soil Map Page: 22 NRCS Soil Map Stream Order 1°

County: Scioto Township / City: MADISON TWP

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 6/15/2011 Quantity: 0.10"

Photograph Information: SEE ESR

Elevated Turbidity? (Y/N): Y Canopy (% open): 90%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) 18.23 Dissolved Oxygen (mg/l) 7.11 pH (S.U.) 7.34 Conductivity (µmhos/cm) 0.121

Is the sampling reach representative of the stream (Y/N) Y If not, please explain: STREAM is better downstream in Wooded AREA

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

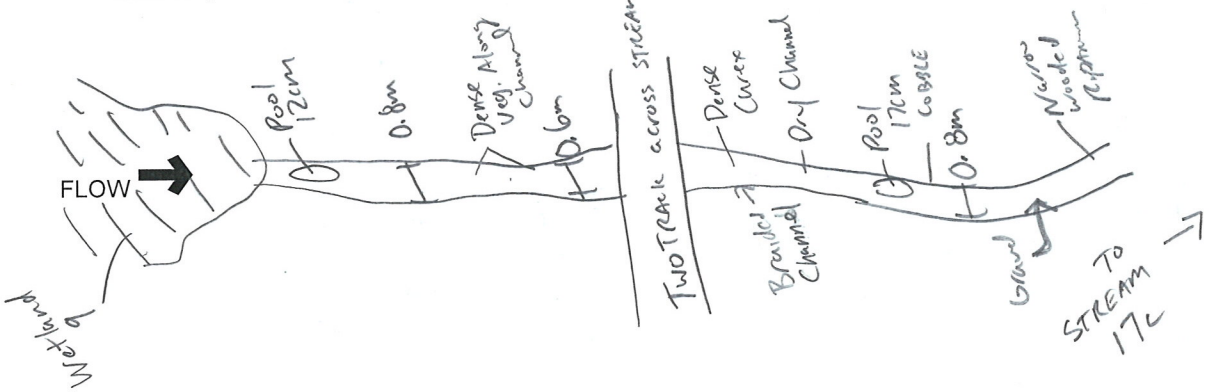
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

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

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



OhioEPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 59

SITE NAME/LOCATION 17d

SITE NUMBER _____ RIVER BASIN _____ DRAINAGE AREA (mi²) 0.11

LENGTH OF STREAM REACH (ft) 200 LAT. 38.8623 LONG. 82.8990 RIVER CODE _____ RIVER MILE _____

DATE 6/21/2011 SCORER Jason Earley COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

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

Culvert under Lucasville Minford Road

1. 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.

TYPE		PERCENT	TYPE		PERCENT
☐☐	BLDR SLABS [16 pts]		☐☐	SILT [3 pt]	25%
☐☐	BOULDER (>256 mm) [16 pts]	5%	☐☐	LEAF PACK/WOODY DEBRIS [3 pts]	10%
☐☐	BEDROCK [16 pt]		☐☐	FINE DETRITUS [3 pts]	5%
☐☐	COBBLE (65-256 mm) [12 pts]	5%	☐☐	CLAY or HARDPAN [0 pt]	20%
☐☐	GRAVEL (2-64 mm) [9 pts]	30%	☐☐	MUCK [0 pts]	
☐☐	SAND (<2 mm) [6 pts]		☐☐	ARTIFICIAL [3 pts]	

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 10% (A) 12 (B) 7

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

HHEI Metric Points

Substrate Max = 40: 19

A + B

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):

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

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): 17

Pool Depth Max = 30: 25

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

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

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters): 1.0

Bankfull Width Max=30: 15

This information must also be completed

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

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

COMMENTS _____

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

- ☒ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS Likely intermittent stream - Heavy Rain DAY BEFORE

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

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

STREAM GRADIENT ESTIMATE

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

October 24, 2002 Revision

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

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

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: Long Run Distance from Evaluated Stream 1.25 mi

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: New Boston NRCS Soil Map Page: 22 NRCS Soil Map Stream Order 2°

County: Scioto Township / City: Madison Twp

MISCELLANEOUS

Base Flow Conditions? (Y/N): N Date of last precipitation: 6/20/2011 Quantity: 0.66 in

Photograph Information: SEE ESR

Elevated Turbidity? (Y/N): N Canopy (% open): 100%

Were samples collected for water chemistry? (Y/N): _____ (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) 18.9 Dissolved Oxygen (mg/l) 6.55 pH (S.U.) 7.63 Conductivity (µmhos/cm) 0.162

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

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

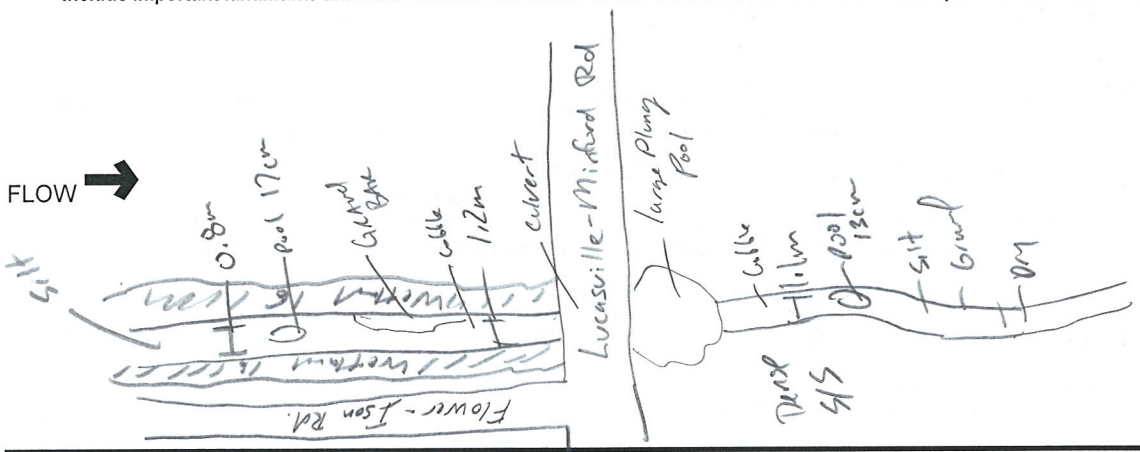
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) Y Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: Green Frog & TADPOLES

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

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



OhioEPA Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

QHEI Score: 78.5

Stream & Location: STREAM 18 - Long Run @ SR 139 **RM:** ___ **Date:** 6/07/2011

Scorers Full Name & Affiliation: Jason Earley - ASC Group

River Code: ___-___-___ **STORET #:** _____ **Lat./Long.:** (NAD 83 - decimal °) 38.8541 / 82.8814 Office verified location ☐

1] SUBSTRATE
Check *ONLY* Two substrate *TYPE BOXES*; estimate % or note every type present

BEST TYPES	POOL	RIFFLE	OTHER TYPES	POOL	RIFFLE
☐ ☐ BLDR /SLABS [10]	10	25	☐ ☐ HARDPAN [4]		
☐ ☐ BOULDER [9]			☐ ☐ DETRITUS [3]	10	
☒ ☐ COBBLE [8]	15	25	☐ ☐ MUCK [2]	10	
☐ ☐ GRAVEL [7]	15	20	☐ ☐ SILT [2]		
☐ ☐ SAND [6]	15		☐ ☐ ARTIFICIAL [0]	5	10
☐ ☒ BEDROCK [5]	20	20	(Score natural substrates; ignore sludge from point-sources)		

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

Check ONE (*Or 2 & average*)

ORIGIN
- ☒ LIMESTONE [1]
- ☐ TILLS [1]
- ☐ WETLANDS [0]
- ☐ HARDPAN [0]
- ☐ SANDSTONE [0]
- ☐ RIP/RAP [0]
- ☐ LACUSTURINE [0]
- ☐ SHALE [-1]
- ☐ COAL FINES [-2]

QUALITY

SILT
- ☐ HEAVY [-2]
- ☐ MODERATE [-1]
- ☒ NORMAL [0]
- ☐ FREE [1]

EMBEDDEDNESS
- ☐ EXTENSIVE [-2]
- ☐ MODERATE [-1]
- ☒ NORMAL [0]
- ☐ NONE [1]

Substrate 16 (Maximum 20)

Comments

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

1 UNDERCUT BANKS [1]	0 POOLS > 70cm [2]	0 OXBOWS, BACKWATERS [1]
1 OVERHANGING VEGETATION [1]	1 ROOTWADS [1]	0 AQUATIC MACROPHYTES [1]
1 SHALLOWS (IN SLOW WATER) [1]	1 BOULDERS [1]	1 LOGS OR WOODY DEBRIS [1]
1 ROOTMATS [1]		

AMOUNT
Check ONE (*Or 2 & average*)
- ☐ EXTENSIVE >75% [11]
- ☒ MODERATE 25-75% [7]
- ☐ SPARSE 5-<25% [3]
- ☐ NEARLY ABSENT <5% [1]

Comments

Cover Maximum 20: 14

3] CHANNEL MORPHOLOGY
Check ONE in each category (*Or 2 & average*)

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

6 2.5

Comments

Channel Maximum 20: 17.5

4] BANK EROSION AND RIPARIAN ZONE
Check ONE in each category for *EACH BANK* (*Or 2 per bank & average*)

River right looking downstream

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

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

Comments

Riparian Maximum 10: 7

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

MAXIMUM DEPTH
Check **ONE** (*ONLY!*)
- ☐ > 1m [6]
- ☐ 0.7-<1m [4]
- ☒ 0.4-<0.7m [2]
- ☐ 0.2-<0.4m [1]
- ☐ < 0.2m [0]

CHANNEL WIDTH
Check ONE (*Or 2 & average*)
- ☒ POOL WIDTH > RIFFLE WIDTH [2]
- ☐ POOL WIDTH = RIFFLE WIDTH [1]
- ☐ POOL WIDTH < RIFFLE WIDTH [0]

CURRENT VELOCITY
Check ALL that apply
- ☐ TORRENTIAL [-1]
- ☐ SLOW [1]
- ☒ VERY FAST [1]
- ☐ INTERSTITIAL [-1]
- ☒ FAST [1]
- ☐ INTERMITTENT [-2]
- ☒ MODERATE [1]
- ☒ EDDIES [1]

Indicate for reach - pools and riffles.

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

Comments

Pool / Current Maximum 12: 8

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

RIFFLE DEPTH
- ☒ BEST AREAS > 10cm [2]
- ☐ BEST AREAS 5-10cm [1]
- ☐ BEST AREAS < 5cm [metric=0]

RUN DEPTH
- ☐ MAXIMUM > 50cm [2]
- ☒ MAXIMUM < 50cm [1]

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

RIFFLE / RUN EMBEDDEDNESS
- ☐ NONE [2]
- ☒ LOW [1]
- ☐ MODERATE [0]
- ☐ EXTENSIVE [-1]

Comments

Riffle / Run Maximum 8: 6

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

%POOL: 30 %GLIDE: 15 %RUN: 25 %RIFFLE: 30

Gradient Maximum 10: 10

DRAINAGE AREA (14.2 mi²)

A] SAMPLED REACH

Check ALL that apply

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

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

_____ meters

STAGE

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

CLARITY

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

1st _____ cm
2nd _____ cm

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

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

Creek Chubs, And likely Johnny Darters observed

Temp = 23.3°C

pH = 7.29

D.O. = 2.44 mg/L

Cond = 0.248

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

C] RECREATION

AREA DEPTH

POOL: ☐ >100ft² ☐ >3ft

D] MAINTENANCE

Circle some & *COMMENT*

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

E] ISSUES

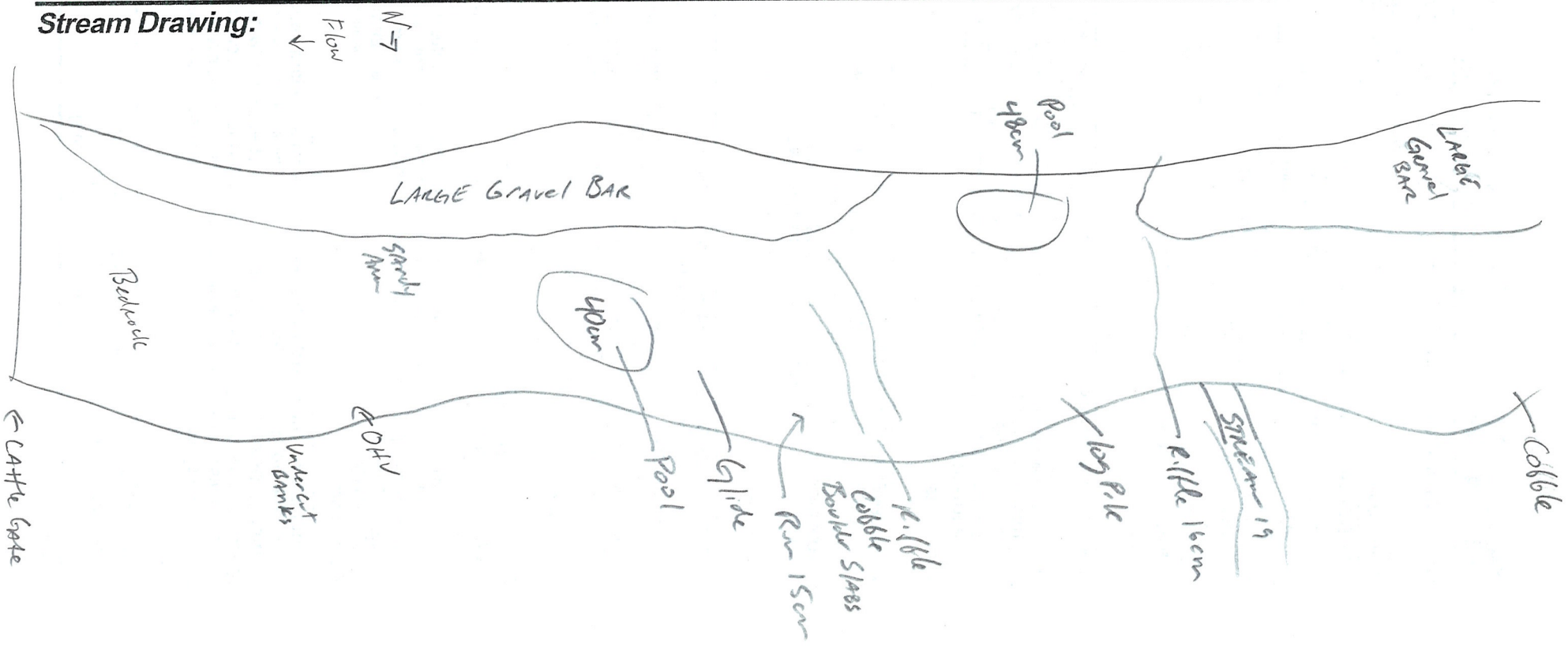
WWTP / CSO / NPDES / INDUSTRY
HARDENED / URBAN / DIRT&GRIME
CONTAMINATED / LANDFILL
BMPs-CONSTRUCTION-SEDIMENT
LOGGING / IRRIGATION / COOLING
BANK / EROSION / SURFACE
FALSE BANK / MANURE / LAGOON
WASH H_20 / TILE / H_20 TABLE
ACID / MINE / QUARRY / FLOW
NATURAL / WETLAND / STAGNANT
PARK / GOLF / LAWN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

F] MEASUREMENTS

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

Legacy Tree:

Stream Drawing:



Ohio EPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 39

SITE NAME/LOCATION IB-1 - Rase Property

SITE NUMBER _____ RIVER BASIN _____ DRAINAGE AREA (mi²) 0.072 mi²

LENGTH OF STREAM REACH (ft) 200 LAT. 38.8532 LONG. 82.8774 RIVER CODE _____ RIVER MILE _____

DATE 6/28/2011 SCORER Jason Emaley COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

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

In Cattle Pasture

1. 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.

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS [16 pts]		☐	SILT [3 pts]	25%
☐	BOULDER (>256 mm) [16 pts]		☐	LEAF PACK/WOODY DEBRIS [3 pts]	
☐	BEDROCK [16 pt]	5%	☐	FINE DETRITUS [3 pts]	
☐	COBBLE (65-256 mm) [12 pts]	5%	☐	CLAY or HARDPAN [0 pt]	45%
☐	GRAVEL (2-64 mm) [9 pts]	15%	☐	MUCK [0 pts]	
☐	SAND (<2 mm) [6 pts]		☐	ARTIFICIAL [3 pts]	5%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 10% (A) 3 (B) 6

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

HHEI Metric Points

Substrate Max = 40: 9

A + B

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):

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

15

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters):

Pool Depth Max = 30: 25

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

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

0.75

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters)

Bankfull Width Max=30: 5

This information must also be completed

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

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

COMMENTS _____

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

- ☐ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☒ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS _____

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

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

STREAM GRADIENT ESTIMATE

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

October 24, 2002 Revision

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

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

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: LONG Run Distance from Evaluated Stream 0.09 miles

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: New Boston NRCS Soil Map Page: 30 NRCS Soil Map Stream Order 1°

County: Scioto Township / City: HARRISON Twp

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 6/27/2011 Quantity: 0.02"

Photograph Information: SEE ESR

Elevated Turbidity? (Y/N): Y Canopy (% open): 100 %

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

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

Is the sampling reach representative of the stream (Y/N) Y If not, please explain: No Field water Quality Collected due to cow related sanitary issues

Additional comments/description of pollution impacts: Located in Active cow pasture

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

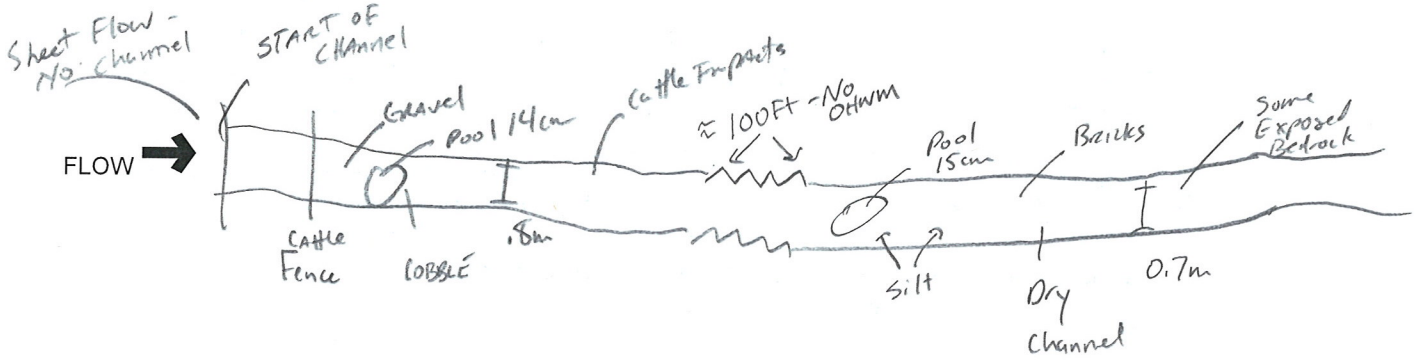
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) Y Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: Frogs And tadpoles

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

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



Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 39

SITE NAME/LOCATION Stream 18 b

SITE NUMBER _____ RIVER BASIN _____ DRAINAGE AREA (mi²) 0.18 mi²

LENGTH OF STREAM REACH (ft) 200 ft LAT. 38.8522 LONG. 82.8744 RIVER CODE _____ RIVER MILE _____

DATE 6/28/2011 SCORER Jason Earley COMMENTS Cow Pasture - Active

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

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

1. 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.

TYPE		PERCENT	TYPE		PERCENT
☐☐	BLDR SLABS [16 pts]		☐☐	SILT [3 pts]	5%
☐☐	BOULDER (>256 mm) [16 pts]		☐☐	LEAF PACK/WOODY DEBRIS [3 pts]	
☐☐	BEDROCK [16 pt]		☐☐	FINE DETRITUS [3 pts]	
☐☐	COBBLE (65-256 mm) [12 pts]	10 %	☐☐	CLAY or HARDPAN [0 pt]	25
☐☐	GRAVEL (2-64 mm) [9 pts]	20%	☐☐	MUCK [0 pts]	
☐☐	SAND (<2 mm) [6 pts]	10 %	☐☐	ARTIFICIAL [3 pts]	30%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 10 % (A) 3 (B) 6

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

HHEI Metric Points

Substrate Max = 40: 9

A + B

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):

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

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): 12

Pool Depth Max = 30: 25

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

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

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters): .8 m

Bankfull Width Max=30: 5

This information must also be completed

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

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

COMMENTS Active Cow Pasture - Currently Grazed

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

- ☐ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☒ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS Likely intermittent

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

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

STREAM GRADIENT ESTIMATE

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

October 24, 2002 Revision

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

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

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: Long Run Distance from Evaluated Stream 0.32 mi

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: Minford NRCS Soil Map Page: 30 NRCS Soil Map Stream Order 1°

County: Scioto Township / City: Harrison Twp.

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 6/27/2011 Quantity: 6/27/2011

Photograph Information: SEE ESR

Elevated Turbidity? (Y/N): N Canopy (% open): 100%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

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

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

Additional comments/description of pollution impacts: WATER QUALITY SAMPLES NOT COLLECTED DUE TO SANITARY CONDITIONS DUE TO CATTLE IN STREAM

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

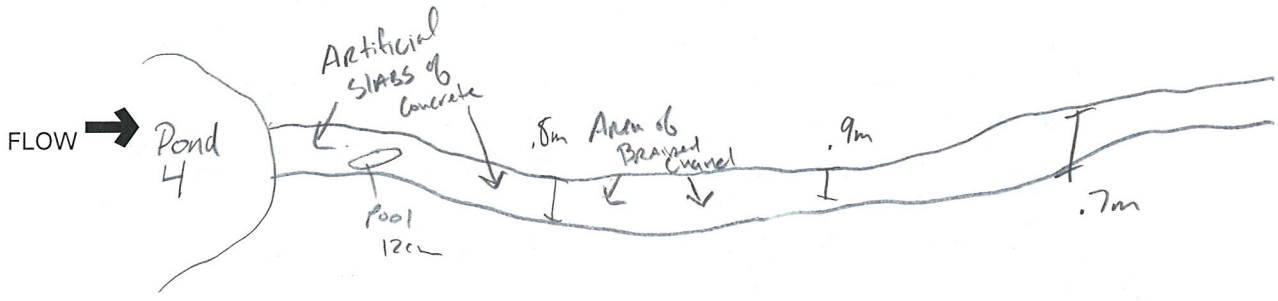
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) Y Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

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

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



OhioEPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 69

SITE NAME/LOCATION STREAM 19

SITE NUMBER _____ RIVER BASIN _____ DRAINAGE AREA (mi²) 0.207

LENGTH OF STREAM REACH (ft) _____ LAT. 38.8590 LONG: 82.8827 RIVER CODE _____ RIVER MILE _____

DATE 6/7/2011 SCORER JasonEARley COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

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

1. 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.

TYPE		PERCENT	TYPE		PERCENT
☐☐	BLDR SLABS [16 pts]	5%	☐☐	SILT [3 pts]	5%
☐☐	BOULDER (>256 mm) [16 pts]		☐☐	LEAF PACK/WOODY DEBRIS [3 pts]	10%
☐☐	BEDROCK [16 pt]		☐☐	FINE DETRITUS [3 pts]	10%
☐☐	COBBLE (65-256 mm) [12 pts]	30%	☐☐	CLAY or HARDPAN [0 pt]	
☐☐	GRAVEL (2-64 mm) [9 pts]	25%	☐☐	MUCK [0 pts]	
☐☐	SAND (<2 mm) [6 pts]	10%	☐☐	ARTIFICIAL [3 pts]	5%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 35% (A) 21 (B) 8

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

HHEI Metric Points

Substrate Max = 40: 29

A + B

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):

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

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters):

Pool Depth Max = 30: 25

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

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

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters)

Bankfull Width Max=30: 15

This information must also be completed

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

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

COMMENTS _____

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

- ☐ Stream Flowing
- ☒ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS _____

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

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

STREAM GRADIENT ESTIMATE

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

October 24, 2002 Revision

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

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

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: Long Run Distance from Evaluated Stream Trib to Long Run

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: New Boston NRCS Soil Map Page: 30 NRCS Soil Map Stream Order 2°

County: Scioto Township / City: Harrison Twp

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 6/5/2011 Quantity: 0.09"

Photograph Information: SEE ESR

Elevated Turbidity? (Y/N): N Canopy (% open): 40%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) 23.5 Dissolved Oxygen (mg/l) 3.98 pH (S.U.) 7.24 Conductivity (µmhos/cm) 0.205

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

Additional comments/description of pollution impacts: Pipe into STREAM Appears to be from failing septic. BLACK Sludge and foul odors at point of Discharge upstream OF Surveyed Reach.

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

Fish Observed? (Y/N) Y Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

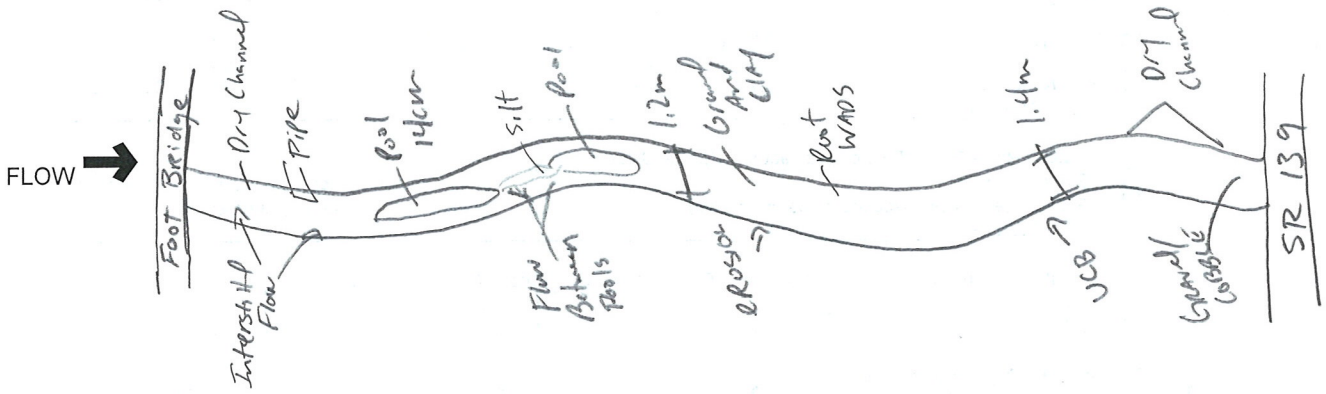
Frogs or Tadpoles Observed? (Y/N) Y Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology:

Fish and TADPOLES & Frogs observed - not collected or ID

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

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



Ohio EPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 52

SITE NAME/LOCATION STREAM 19-1

SITE NUMBER _____ RIVER BASIN _____ DRAINAGE AREA (mi²) 0.047

LENGTH OF STREAM REACH (ft) 200 LAT. 38.8576 LONG. 82.8867 RIVER CODE _____ RIVER MILE _____

DATE 6/7/2011 SCORER Jason Earley COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

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

1. 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.

TYPE		PERCENT	TYPE		PERCENT
☐☐	BLDR SLABS [16 pts]		☐☐	SILT [3 pt]	
☐☐	BOULDER (>256 mm) [16 pts]		☐☐	LEAF PACK/WOODY DEBRIS [3 pts]	10%
☐☐	BEDROCK [16 pt]		☐☐	FINE DETRITUS [3 pts]	
☐☐	COBBLE (65-256 mm) [12 pts]		☒☐	CLAY or HARDPAN [0 pt]	60%
☐☒	GRAVEL (2-64 mm) [9 pts]	30%	☐☐	MUCK [0 pts]	
☐☐	SAND (<2 mm) [6 pts]		☐☐	ARTIFICIAL [3 pts]	

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 0% (A) 9 (B) 3

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

HHEI Metric Points

Substrate Max = 40: 12

A + B

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):

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

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters):

Pool Depth Max = 30: 25

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

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

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters)

Bankfull Width Max=30: 15

This information must also be completed

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

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

COMMENTS _____

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

- ☐ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☒ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS _____

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

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

STREAM GRADIENT ESTIMATE

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

October 24, 2002 Revision

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

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

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: Long Run Distance from Evaluated Stream 0.42 mi

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: New Boston NRCS Soil Map Page: 30 NRCS Soil Map Stream Order 1°

County: Scioto Township / City: Harrison Twp

MISCELLANEOUS

Base Flow Conditions? (Y/N): N Date of last precipitation: 6/5/2011 Quantity: 0.09"

Photograph Information: SEE ESR

Elevated Turbidity? (Y/N): N Canopy (% open): 10%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) 21.9 Dissolved Oxygen (mg/l) 5.4 pH (S.U.) 5.44 Conductivity (µmhos/cm) 0.094

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

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

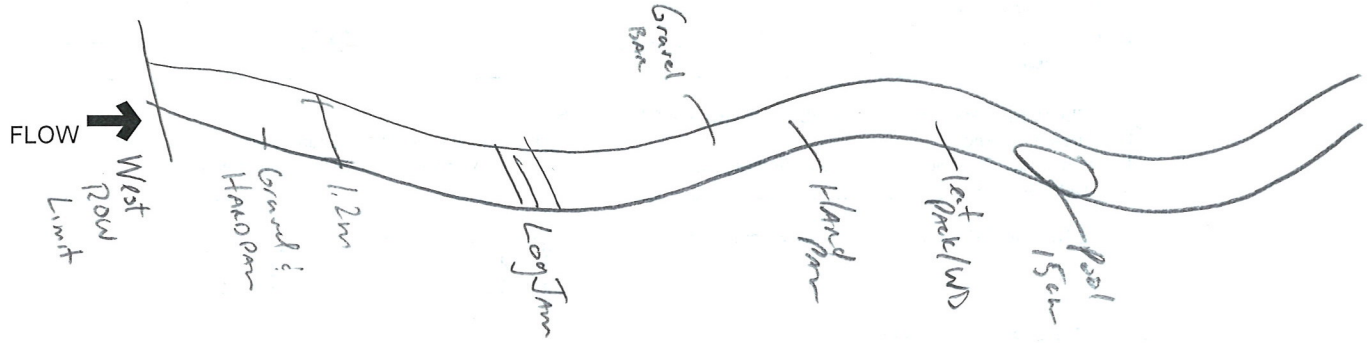
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

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

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



OhioEPA Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

QHEI Score: 58.5

Stream & Location: STREAM 20 @ Swanger Valley Rd **RM:** ___.___ **Date:** 6 / 8 / 2011

Scorers Full Name & Affiliation:

River Code: ___-___-___ **STORET #:** _____ **Lat./Long.:** (NAD 83 - decimal °) 38.8501 / 82.8683 **Office verified location** ☐

1] SUBSTRATE
Check *ONLY* Two substrate *TYPE BOXES*; estimate % or note every type present

BEST TYPES	POOL	RIFFLE	OTHER TYPES	POOL	RIFFLE
☐ ☐ BLDR /SLABS [10]			☐ ☐ HARDPAN [4]		
☐ ☐ BOULDER [9]			☐ ☐ DETRITUS [3]	10	
☒ ☐ COBBLE [8]	10	50	☐ ☐ MUCK [2]		
☐ ☒ GRAVEL [7]	50	20	☐ ☐ SILT [2]	20	
☐ ☐ SAND [6]	10		☐ ☐ ARTIFICIAL [0]		
☐ ☐ BEDROCK [5]		30	(Score natural substrates; ignore sludge from point-sources)		

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

Check ONE (*Or 2 & average*)

ORIGIN
- ☒ LIMESTONE [1]
- ☐ TILLS [1]
- ☐ WETLANDS [0]
- ☐ HARDPAN [0]
- ☐ SANDSTONE [0]
- ☐ RIP/RAP [0]
- ☐ LACUSTURINE [0]
- ☐ SHALE [-1]
- ☐ COAL FINES [-2]

QUALITY

SILT
- ☐ HEAVY [-2]
- ☒ MODERATE [-1]
- ☐ NORMAL [0]
- ☐ FREE [1]

EMBEDDEDNESS
- ☐ EXTENSIVE [-2]
- ☒ MODERATE [-1]
- ☐ NORMAL [0]
- ☐ NONE [1]

Substrate 14 *Maximum 20*

Comments

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

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

AMOUNT
Check ONE (*Or 2 & average*)
- ☐ EXTENSIVE >75% [11]
- ☒ MODERATE 25-75% [7]
- ☐ SPARSE 5-<25% [3]
- ☐ NEARLY ABSENT <5% [1]

Cover 13 *Maximum 20*

Comments

3] CHANNEL MORPHOLOGY
Check ONE in each category (*Or 2 & average*)

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

2.5

Channel 11.5 *Maximum 20*

Comments

4] BANK EROSION AND RIPARIAN ZONE
Check ONE in each category for *EACH BANK* (*Or 2 per bank & average*)

River right looking downstream

EROSION

L	R	
☐	☐	NONE / LITTLE [3]
☒	☒	MODERATE [2]
☐	☐	HEAVY / SEVERE [1]

RIPARIAN WIDTH

L	R	
☐	☐	WIDE > 50m [4]
☒	☐	MODERATE 10-50m [3]
☐	☐	NARROW 5-10m [2]
☐	☒	VERY NARROW < 5m [1]
☐	☐	NONE [0]

FLOOD PLAIN QUALITY

L	R	
☐	☐	FOREST, SWAMP [3]
☐	☒	SHRUB OR OLD FIELD [2]
☐	☐	RESIDENTIAL, PARK, NEW FIELD [1]
☐	☐	FENCED PASTURE [1]
☒	☐	OPEN PASTURE, ROWCROP [0]

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

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

Riparian 4.5 *Maximum 10*

Comments

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

MAXIMUM DEPTH
Check ONE (*ONLY!*)
- ☐ > 1m [6]
- ☐ 0.7-<1m [4]
- ☒ 0.4-<0.7m [2]
- ☐ 0.2-<0.4m [1]
- ☐ < 0.2m [0]

CHANNEL WIDTH
Check ONE (*Or 2 & average*)
- ☒ POOL WIDTH > RIFFLE WIDTH [2]
- ☐ POOL WIDTH = RIFFLE WIDTH [1]
- ☐ POOL WIDTH < RIFFLE WIDTH [0]

CURRENT VELOCITY
Check ALL that apply
- ☐ TORRENTIAL [-1]
- ☐ VERY FAST [1]
- ☒ FAST [1]
- ☐ MODERATE [1]
- ☒ SLOW [1]
- ☐ INTERSTITIAL [-1]
- ☐ INTERMITTENT [-2]
- ☐ EDDIES [1]

Indicate for reach - pools and riffles.

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

Pool / Current 6 *Maximum 12*

Comments

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species: ☐ NO RIFFLE [metric=0]

Check ONE (*Or 2 & average*).

RIFFLE DEPTH
- ☐ BEST AREAS > 10cm [2]
- ☒ BEST AREAS 5-10cm [1]
- ☐ BEST AREAS < 5cm [metric=0]

RUN DEPTH
- ☐ MAXIMUM > 50cm [2]
- ☒ MAXIMUM < 50cm [1]

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

RIFFLE / RUN EMBEDDEDNESS
- ☐ NONE [2]
- ☐ LOW [1]
- ☒ MODERATE [0]
- ☐ EXTENSIVE [-1]

Riffle / Run 3.5 *Maximum 8*

Comments

6] GRADIENT
(10 ft/mi)

DRAINAGE AREA (0.93 mi²)

- ☒ VERY LOW - LOW [2-4]
- ☐ MODERATE [6-10]
- ☐ HIGH - VERY HIGH [10-6]

%POOL: 20 %GLIDE: 10 %RUN: 40 %RIFFLE: 30

Gradient 6 *Maximum 10*

A] SAMPLED REACH
Check ALL that apply

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

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

_____ meters

STAGE

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

CLARITY

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

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

1st _____ cm
2nd _____ cm

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

Fish ID- Johnny Darter, Creek Chub, 2-lined salamander
2nd Year tadpoles - crayfish, norther water snake, short tailed shrew

Temp = 25.8°C, D.O. = 5.42, pH = 7.36, Cond = 0.301

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

C] RECREATION
AREA DEPTH
POOL: ☐ >100ft² ☐ >3ft

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

Circle some & *COMMENT*

Cattle upstream

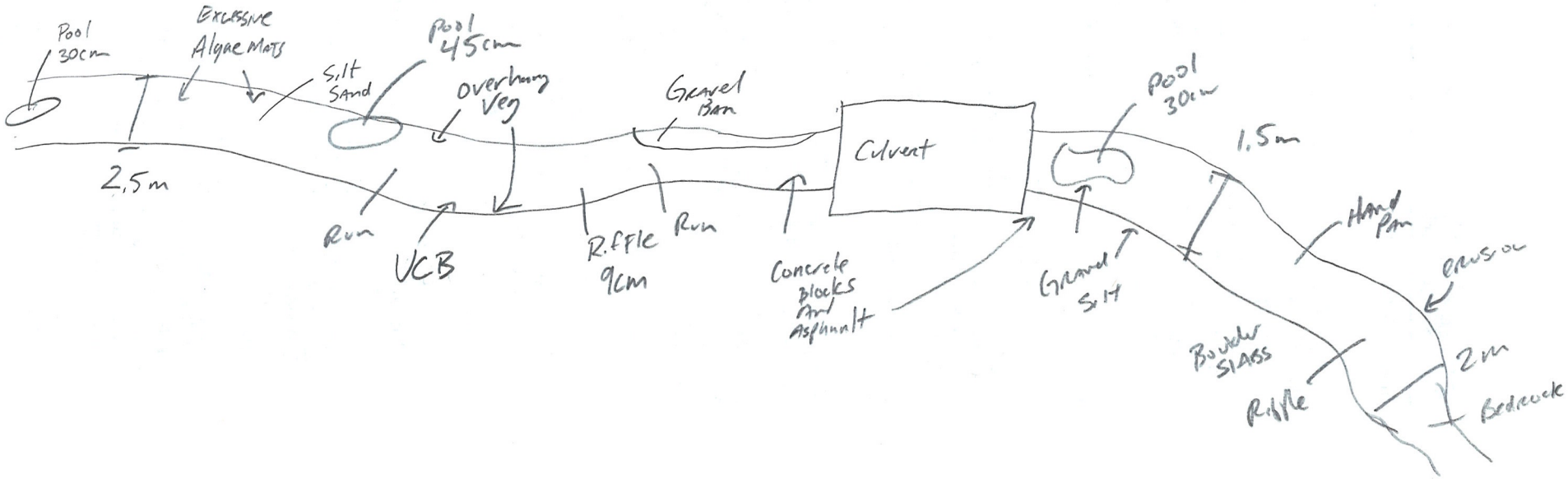
E] ISSUES
WWTP / CSO / NPDES / INDUSTRY
HARDENED / URBAN / DIRT&GRIME
CONTAMINATED / LANDFILL
BMPs-CONSTRUCTION-SEDIMENT
LOGGING / IRRIGATION / COOLING
~~BANK~~ / EROSION / SURFACE
FALSE BANK / ~~MANURE~~ / LAGOON
WASH H_20 / TILE / H_20 TABLE
ACID / MINE / QUARRY / FLOW
NATURAL / WETLAND / STAGNANT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

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

Legacy Tree:

Stream Drawing:

→ Flow



OhioEPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 47

SITE NAME/LOCATION Stream 20-1

SITE NUMBER _____ RIVER BASIN _____ DRAINAGE AREA (mi²) 0.036

LENGTH OF STREAM REACH (ft) 200 ft LAT. 38.8490 LONG. 82.8674 RIVER CODE _____ RIVER MILE _____

DATE 6/7/2011 SCORER Jason Earley COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

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

1. 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.

TYPE		PERCENT	TYPE		PERCENT
☐☐	BLDR SLABS [16 pts]	5%	☐☐	SILT [3 pt]	
☐☐	BOULDER (>256 mm) [16 pts]		☐☐	LEAF PACK/WOODY DEBRIS [3 pts]	10%
☐☐	BEDROCK [16 pt]		☐☐	FINE DETRITUS [3 pts]	
☐☐	COBBLE (65-256 mm) [12 pts]	25%	☐☐	CLAY or HARDPAN [0 pt]	10%
☐☐	GRAVEL (2-64 mm) [9 pts]	30%	☐☐	MUCK [0 pts]	
☐☐	SAND (<2 mm) [6 pts]	20%	☐☐	ARTIFICIAL [3 pts]	

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 30% (A) 21 (B) 6

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

HHEI Metric Points

Substrate Max = 40: 27

A + B

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):

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

3cm

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters):

Pool Depth Max = 30: 5

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

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

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters)

Bankfull Width Max=30: 15

This information must also be completed

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

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

COMMENTS _____

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

- ☐ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☒ Dry channel, no water (Ephemeral)

COMMENTS Not enough water for Field measures

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

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

STREAM GRADIENT ESTIMATE

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

October 24, 2002 Revision

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

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

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: Long Run Distance from Evaluated Stream 0.30 mi

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: Minford NRCS Soil Map Page: 30 NRCS Soil Map Stream Order 1°

County: Scioto Township / City: Harrison Twp

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 6/5/2011 Quantity: 0.09'

Photograph Information: SEE ESR REPORT

Elevated Turbidity? (Y/N): N Canopy (% open): 5%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) N/A Dissolved Oxygen (mg/l) N/A pH (S.U.) N/A Conductivity (µmhos/cm) N/A

Is the sampling reach representative of the stream (Y/N) N If not, please explain: Higher Quality stream in woods than in Pasture

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

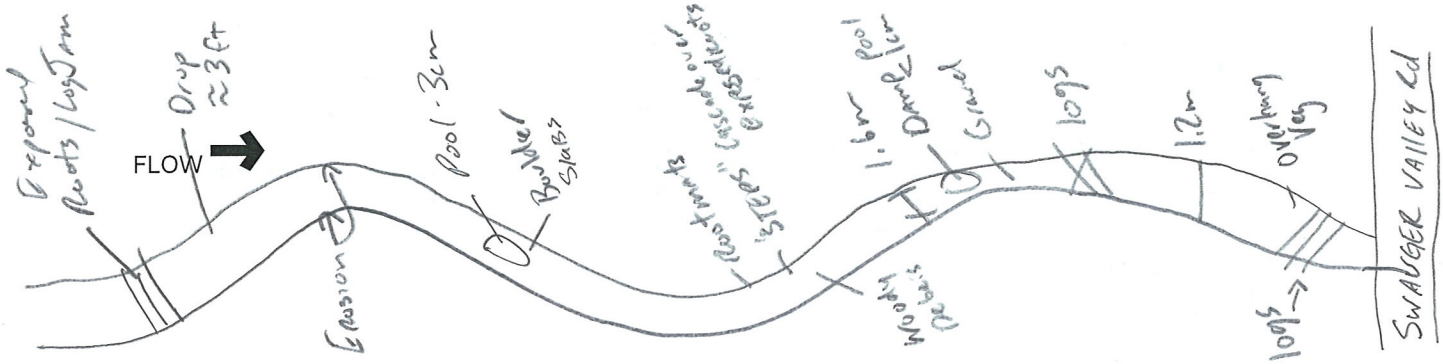
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

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

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



Ohio EPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 23

SITE NAME/LOCATION Stream 20-2 - to Pond 5

SITE NUMBER _____ RIVER BASIN _____ DRAINAGE AREA (mi²) 0.0134 mi²

LENGTH OF STREAM REACH (ft) 200 LAT. 38.8499 LONG. 82.8716 RIVER CODE _____ RIVER MILE _____

DATE 6/28/2011 SCORER J. Earley COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

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

Natural Channel in Wooded Area - Impacted in Pasture by Cattle

1. 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.

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

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

(A) 9

(B) 4

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

HHEI Metric Points

Substrate Max = 40

13

A + B

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):

☐	> 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]

4cm

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters):

Pool Depth Max = 30

5

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

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

.9m

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters)

Bankfull Width Max=30

5

This information must also be completed

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

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

COMMENTS _____

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

☐	Stream Flowing	☒	Moist Channel, isolated pools, no flow (Intermittent)
☐	Subsurface flow with isolated pools (Interstitial)	☐	Dry channel, no water (Ephemeral)

COMMENTS _____

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

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

STREAM GRADIENT ESTIMATE

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

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

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

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: Long Run Distance from Evaluated Stream 0.28 mi

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: Minford NRCS Soil Map Page: 30 NRCS Soil Map Stream Order 1°

County: Scioto Township / City: Harrison TWP

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 6/27/2011 Quantity: 0.02"

Photograph Information: SEG ESR Report

Elevated Turbidity? (Y/N): N Canopy (% open): 20%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) N/A Dissolved Oxygen (mg/l) N/A pH (S.U.) N/A Conductivity (µmhos/cm) N/A

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

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

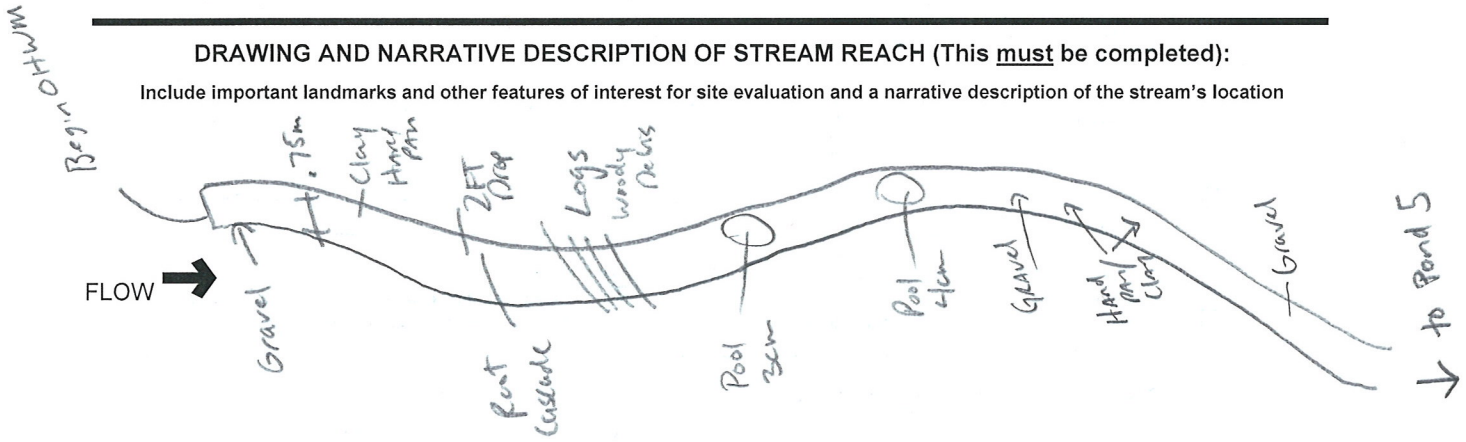
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

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

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



Ohio EPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 49

SITE NAME/LOCATION STREAM 21

SITE NUMBER _____ RIVER BASIN _____ DRAINAGE AREA (mi²) 0.04

LENGTH OF STREAM REACH (ft) 200 ft LAT. 38.8464 LONG. 82.8571 RIVER CODE _____ RIVER MILE _____

DATE 6/22/2011 SCORER Jason Eanley COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

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

1. 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.

TYPE		PERCENT	TYPE		PERCENT
☐☐	BLDR SLABS [16 pts]		☐☐	SILT [3 pt]	10%
☐☐	BOULDER (>256 mm) [16 pts]		☐☐	LEAF PACK/WOODY DEBRIS [3 pts]	15%
☐☐	BEDROCK [16 pt]		☐☐	FINE DETRITUS [3 pts]	
☐☐	COBBLE (65-256 mm) [12 pts]	20%	☒☐	CLAY or HARDPAN [0 pt]	30%
☐☒	GRAVEL (2-64 mm) [9 pts]	25%	☐☐	MUCK [0 pts]	
☐☐	SAND (<2 mm) [6 pts]		☐☐	ARTIFICIAL [3 pts]	

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 20% (A) 9 (B) 5

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

HHEI Metric Points

Substrate Max = 40: 14

A + B

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):

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

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): 32

Pool Depth Max = 30: 20

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

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

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters): 1.7

Bankfull Width Max=30:

This information must also be completed

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

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

COMMENTS _____

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

- ☒ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS _____

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

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

STREAM GRADIENT ESTIMATE

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

October 24, 2002 Revision

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

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

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: Long Run Distance from Evaluated Stream 0.7 mi

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: Minford NRCS Soil Map Page: 31 NRCS Soil Map Stream Order 1°

County: Scioto Township / City: Minford

MISCELLANEOUS

Base Flow Conditions? (Y/N): N Date of last precipitation: 6/21/2011 Quantity: 0.98"

Photograph Information: SEE ESR

Elevated Turbidity? (Y/N): N Canopy (% open): 90%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) 18.69 Dissolved Oxygen (mg/l) 8.3 pH (S.U.) 7.46 Conductivity (µmhos/cm) 0.129

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

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

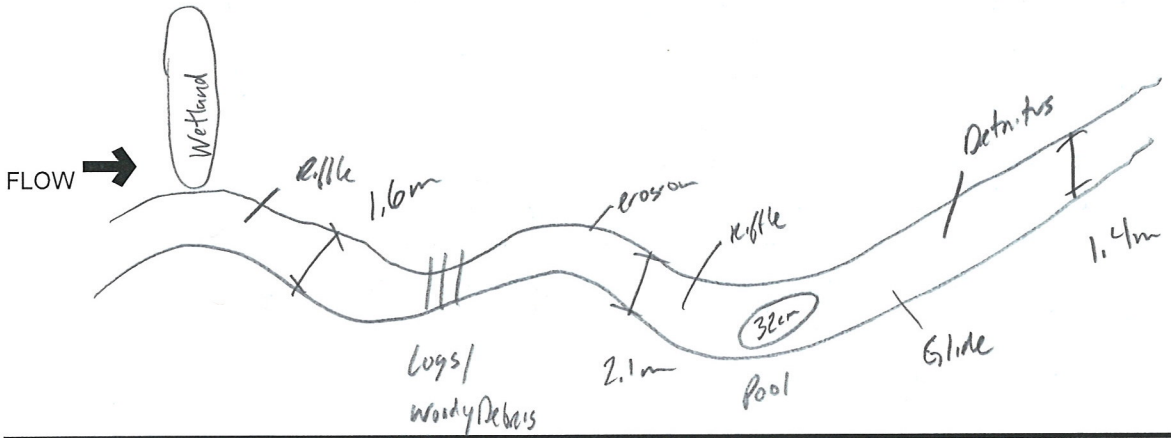
Performed? (Y/N): N* (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) Y Voucher? (Y/N) N

Comments Regarding Biology:
No salamanders observed - Sampled 20 minutes x 2 people.
Leeches, Aquatic Sow Bugs & Riffle Beetles,

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

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



Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 36

SITE NAME/LOCATION STREAM 21A

SITE NUMBER _____ RIVER BASIN _____ DRAINAGE AREA (mi²) 0.039

LENGTH OF STREAM REACH (ft) _____ LAT. 38.8457 LONG. 82.8588 RIVER CODE _____ RIVER MILE _____

DATE 6/21/2011 SCORER Jason Emley COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

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

1. 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.

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

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 0 (A) 12 (B) 4

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

HHEI Metric Points

Substrate Max = 40: 16

A + B

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 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]
- ☐ > 22.5 - 30 cm [30 pts]
- ☐ > 10 - 22.5 cm [25 pts]
- ☒ > 5 cm - 10 cm [15 pts]
- ☐ < 5 cm [5 pts]
- ☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): 9

Pool Depth Max = 30: 15

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

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

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters): 0.8

Bankfull Width Max=30: 5

This information must also be completed

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

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

COMMENTS _____

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

- ☒ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS _____

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

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

STREAM GRADIENT ESTIMATE

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

October 24, 2002 Revision

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

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

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: Long Run Distance from Evaluated Stream 0.33 miles

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: Minford NRCS Soil Map Page: 31 NRCS Soil Map Stream Order 1°

County: Scioto Township / City: Harrison TWP / Minford

MISCELLANEOUS

Base Flow Conditions? (Y/N): N Date of last precipitation: 6/21/2011 Quantity: 0.98"

Photograph Information: SEE ESK

Elevated Turbidity? (Y/N): N Canopy (% open): 90%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) 22.9 Dissolved Oxygen (mg/l) 7.57 pH (S.U.) 6.81 Conductivity (µmhos/cm) 0.167

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

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

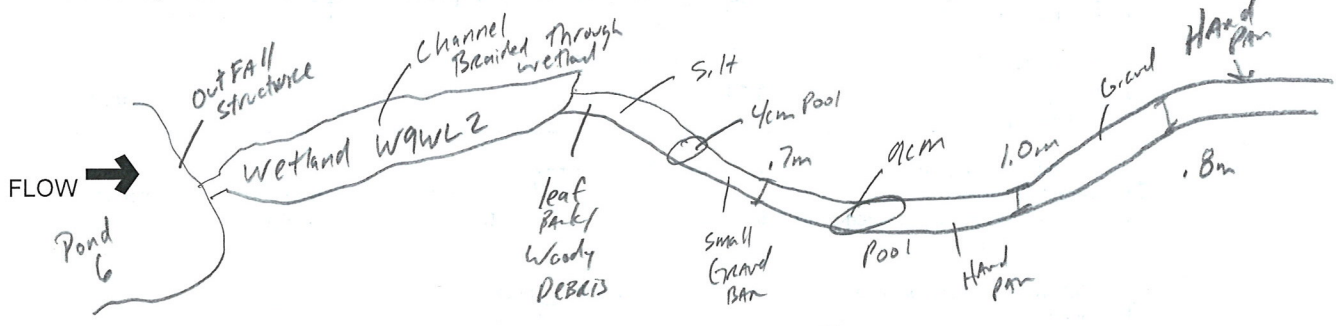
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

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

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



Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 67

SITE NAME/LOCATION STREAM 22-A/B

SITE NUMBER _____ RIVER BASIN _____ DRAINAGE AREA (mi²) 0.18 mi²

LENGTH OF STREAM REACH (ft) _____ LAT. 38.8367 LONG. 82.8548 RIVER CODE _____ RIVER MILE _____

DATE 6/22/2011 SCORER J. Earley COMMENTS Combined STREAMS 22A & 22B because Same STREAM

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

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

Captured Stream Along Shumway Hollow Road

1. 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.

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS **[16 pts]**	10%	☐	SILT **[3 pts]**	10%
☐	BOULDER (>256 mm) **[16 pts]**		☐	LEAF PACK/WOODY DEBRIS **[3 pts]**	
☐	BEDROCK **[16 pt]**	15%	☐	FINE DETRITUS **[3 pts]**	
☐	COBBLE (65-256 mm) **[12 pts]**	25%	☐	CLAY or HARDPAN **[0 pt]**	15%
☐	GRAVEL (2-64 mm) **[9 pts]**	25%	☐	MUCK **[0 pts]**	
☐	SAND (<2 mm) **[6 pts]**		☐	ARTIFICIAL **[3 pts]**	

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 50% (A) 21 (B) 6

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

HHEI Metric Points

Substrate Max = 40: 27

A + B

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):

☐	> 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]**

15

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters):

Pool Depth Max = 30: 25

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

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

1.4

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters)

Bankfull Width Max=30: 15

This information must also be completed

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

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

COMMENTS _____

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

☒	Stream Flowing	☐	Moist Channel, isolated pools, no flow (Intermittent)
☐	Subsurface flow with isolated pools (Interstitial)	☐	Dry channel, no water (Ephemeral)

COMMENTS _____

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

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

STREAM GRADIENT ESTIMATE

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

October 24, 2002 Revision

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

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

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: Little Scioto River Distance from Evaluated Stream 0.78 miles

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: Minford NRCS Soil Map Page: 31 NRCS Soil Map Stream Order 1°

County: Scioto Township / City: Harrison TWP / Minford

MISCELLANEOUS

Base Flow Conditions? (Y/N): N Date of last precipitation: 6/21/2011 Quantity: 0.98"

Photograph Information: SEE ESK

Elevated Turbidity? (Y/N): N Canopy (% open): 100% - AT Sample location

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) 22.1 Dissolved Oxygen (mg/l) 8.02 pH (S.U.) 7.31 Conductivity (µmhos/cm) 0.244

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

Additional comments/description of pollution impacts: Along Side of Shumway Hollow Road, Captured Stream along road.

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

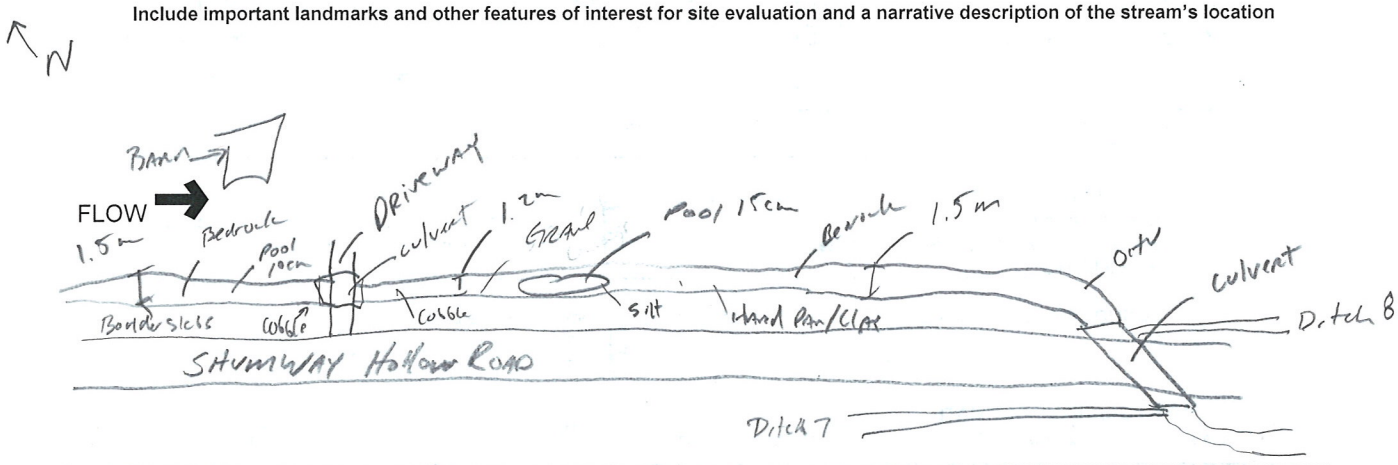
Fish Observed? (Y/N) Y Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) Y Voucher? (Y/N) N

Comments Regarding Biology: Black nosed Dace, YoY and Adult observed in Stream

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

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



Ohio EPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 43

SITE NAME/LOCATION STREAM 22A-1

SITE NUMBER _____ RIVER BASIN _____ DRAINAGE AREA (mi²) 0.03 mi²

LENGTH OF STREAM REACH (ft) 200 FT LAT. 38.8379 LONG. 82.8560 RIVER CODE _____ RIVER MILE _____

DATE 6/23/2011 SCORER J. Earley COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

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

1. 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.

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS [16 pts]		☐	SILT [3 pt]	
☐	BOULDER (>256 mm) [16 pts]		☐	LEAF PACK/WOODY DEBRIS [3 pts]	15%
☐	BEDROCK [16 pt]		☐	FINE DETRITUS [3 pts]	
☐	COBBLE (65-256 mm) [12 pts]	5%	☒	CLAY or HARDPAN [0 pt]	45%
☒	GRAVEL (2-64 mm) [9 pts]	35%	☐	MUCK [0 pts]	
☐	SAND (<2 mm) [6 pts]		☐	ARTIFICIAL [3 pts]	

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 5% (A) 9 (B) 4

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

HHEI Metric Points

Substrate Max = 40: 13

A + B

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):

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

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): 16

Pool Depth Max = 30: 25

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

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

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters): .7m

Bankfull Width Max=30: 5

This information must also be completed

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

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

COMMENTS _____

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

- ☐ Stream Flowing
- ☒ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS _____

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

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

STREAM GRADIENT ESTIMATE

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

October 24, 2002 Revision

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

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

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: Little Scioto River Distance from Evaluated Stream 1 mile +/-

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: Minford NRCS Soil Map Page: 30/31 NRCS Soil Map Stream Order 1°

County: Scioto Township / City: Harrison Twp / Minford

MISCELLANEOUS

Base Flow Conditions? (Y/N): N Date of last precipitation: 6/21/2011 Quantity: 0.98"

Photograph Information: SEE ESR

Elevated Turbidity? (Y/N): N Canopy (% open): 20%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) 19.2 Dissolved Oxygen (mg/l) 6.98 pH (S.U.) 6.80 Conductivity (µmhos/cm) 0.108

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

Additional comments/description of pollution impacts: Area being logged Around Stream

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

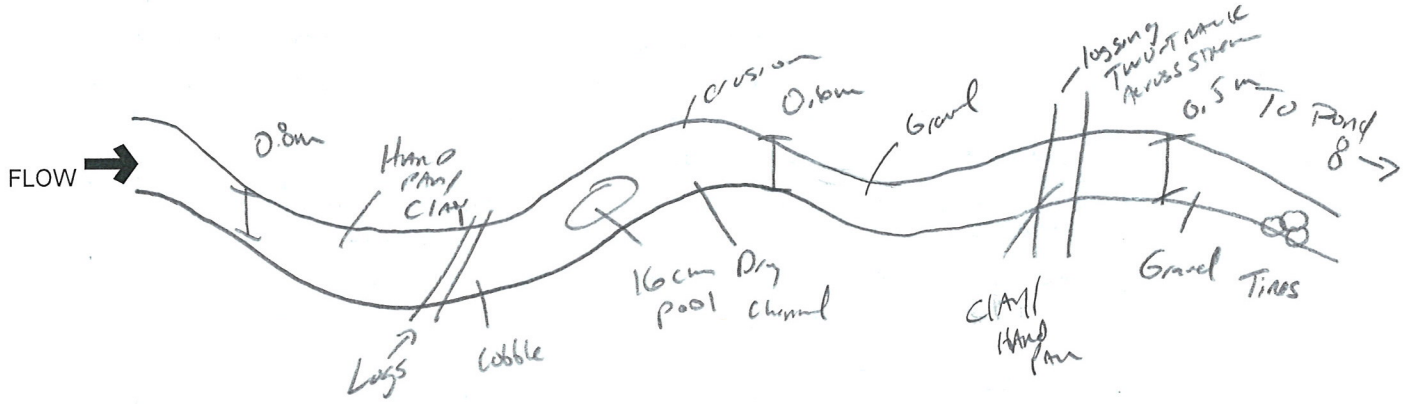
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

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

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



Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 53

SITE NAME/LOCATION STREAM 23/K

SITE NUMBER _____ RIVER BASIN _____ DRAINAGE AREA (mi²) 0.047

LENGTH OF STREAM REACH (ft) 200 LAT. 38.8336 LONG. 82.8528 RIVER CODE _____ RIVER MILE _____

DATE 6/28/2011 SCORER JEARLEY COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

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

1. 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.

TYPE		PERCENT	TYPE		PERCENT
☐☐	BLDR SLABS [16 pts]	15%	☐☐	SILT [3 pt]	25%
☐☐	BOULDER (>256 mm) [16 pts]		☐☐	LEAF PACK/WOODY DEBRIS [3 pts]	15%
☐☐	BEDROCK [16 pt]	5%	☐☐	FINE DETRITUS [3 pts]	
☐☐	COBBLE (65-256 mm) [12 pts]	10%	☐☐	CLAY or HARDPAN [0 pt]	
☐☐	GRAVEL (2-64 mm) [9 pts]	30%	☐☐	MUCK [0 pts]	
☐☐	SAND (<2 mm) [6 pts]		☐☐	ARTIFICIAL [3 pts]	

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 30% (A) 12 (B) 6

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

HHEI Metric Points

Substrate Max = 40: 18

A + B

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):

☐	> 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]

9

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters):

Pool Depth Max = 30: 15

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

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

1.6

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters)

Bankfull Width Max=30: 20

This information must also be completed

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

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

COMMENTS _____

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

☐	Stream Flowing	☒	Moist Channel, isolated pools, no flow (Intermittent)
☐	Subsurface flow with isolated pools (Interstitial)	☐	Dry channel, no water (Ephemeral)

COMMENTS _____

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

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

STREAM GRADIENT ESTIMATE

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

October 24, 2002 Revision

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

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

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: Little Scioto River Distance from Evaluated Stream 0.49 mile

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: Minford NRCS Soil Map Page: 31 NRCS Soil Map Stream Order 1st

County: Scioto Township / City: Harrison Twp / Minford

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 6/27/2011 Quantity: 0.02"

Photograph Information: SEE ESR

Elevated Turbidity? (Y/N): N Canopy (% open): 0%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) 17.13 Dissolved Oxygen (mg/l) 5.47 pH (S.U.) 5.98 Conductivity (µmhos/cm) 0.178

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

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

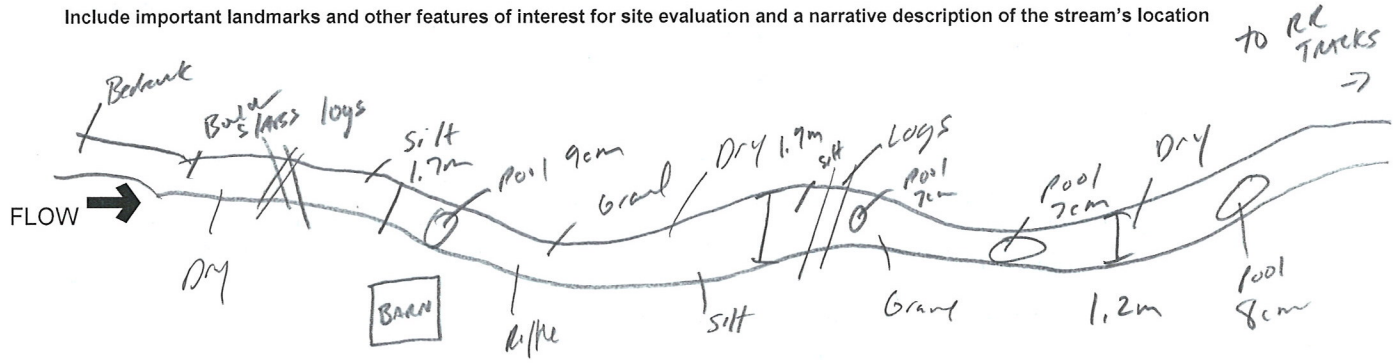
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) Y Voucher? (Y/N) N

Comments Regarding Biology: X6 SAlamanders found, No caddisfly larva, not mayfly or stonefly larva

- Aquatic Sow bugs & leeches found

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

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



Ohio EPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 36

SITE NAME/LOCATION STREAM 24-1

SITE NUMBER _____ RIVER BASIN _____ DRAINAGE AREA (mi²) 0.03 mi²

LENGTH OF STREAM REACH (ft) 200 FT LAT. 38.8306 LONG. 82.8531 RIVER CODE _____ RIVER MILE _____

DATE 6/28/2011 SCORER J. Enerby COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

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

1. 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.

TYPE		PERCENT	TYPE		PERCENT
☐☐	BLDR SLABS [16 pts]	10%	☐☐	SILT [3 pt]	5%
☐☐	BOULDER (>256 mm) [16 pts]		☐☐	LEAF PACK/WOODY DEBRIS [3 pts]	15%
☐☐	BEDROCK [16 pt]		☐☐	FINE DETRITUS [3 pts]	
☐☐	COBBLE (65-256 mm) [12 pts]	15%	☐☐	CLAY or HARDPAN [0 pt]	20%
☐☐	GRAVEL (2-64 mm) [9 pts]	25%	☐☐	MUCK [0 pts]	
☐☐	SAND (<2 mm) [6 pts]	10%	☐☐	ARTIFICIAL [3 pts]	

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 25% (A) 9

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES:

(B) 7

TOTAL NUMBER OF SUBSTRATE TYPES:

HHEI Metric Points

Substrate Max = 40

16

A + B

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 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]**
- ☐ > 22.5 - 30 cm **[30 pts]**
- ☐ > 10 - 22.5 cm **[25 pts]**
- ☐ > 5 cm - 10 cm **[15 pts]**
- ☒ < 5 cm **[5 pts]**
- ☐ NO WATER OR MOIST CHANNEL **[0 pts]**

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): 3cm

Pool Depth Max = 30

5

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

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

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters) 1.2

Bankfull Width Max=30

15

This information must also be completed

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

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

COMMENTS _____

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

- ☐ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☒ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS _____

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

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

STREAM GRADIENT ESTIMATE

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

October 24, 2002 Revision

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

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

DOWNSTREAM DESIGNATED USE(S)

☒ WWH Name: Little Scioto River Distance from Evaluated Stream 0.40 mile +/-

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: Minford NRCS Soil Map Page: 30/31 NRCS Soil Map Stream Order 1°

County: Scioto Township / City: Harrison Twp / Minford

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 6/27/2011 Quantity: 0.02"

Photograph Information: SEE ESR

Elevated Turbidity? (Y/N): N Canopy (% open): 20%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: to Shallow to Collect

Field Measures: Temp (°C) N/A Dissolved Oxygen (mg/l) N/A pH (S.U.) N/A Conductivity (µmhos/cm) N/A

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

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

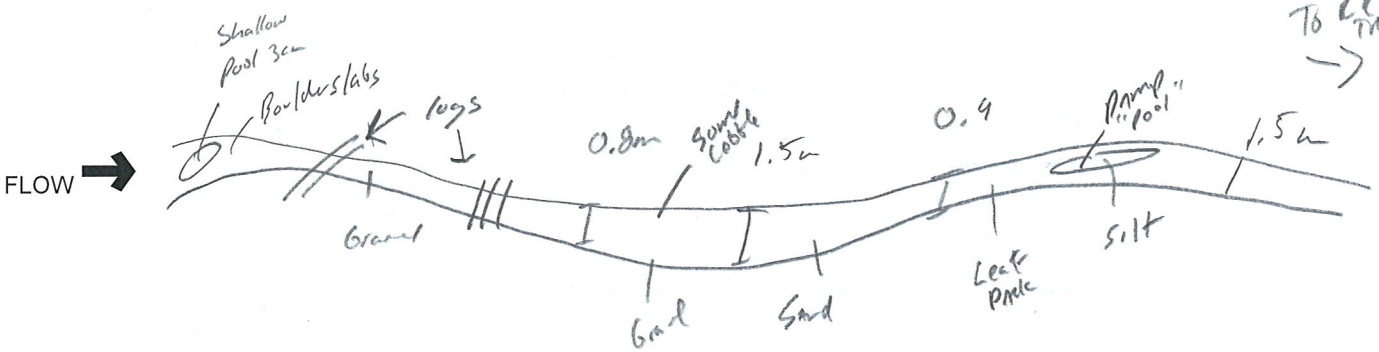
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

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

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



OhioEPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 53

SITE NAME/LOCATION STREAM 18-2

SITE NUMBER _____ RIVER BASIN _____ DRAINAGE AREA (mi²) 0.054 mi²

LENGTH OF STREAM REACH (ft) 200 LAT. 38.85136 LONG. 82.91120 RIVER CODE _____ RIVER MILE _____

DATE 9/13/2011 SCORER JME COMMENTS @ Outlet Along SR 139 & Glendale Rd.

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

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

1. 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.

TYPE		PERCENT	TYPE		PERCENT
☐☐	BLDR SLABS [16 pts]		☐☐	SILT [3 pt]	
☐☐	BOULDER (>256 mm) [16 pts]		☐☐	LEAF PACK/WOODY DEBRIS [3 pts]	10
☐☐	BEDROCK [16 pt]		☐☐	FINE DETRITUS [3 pts]	
☐☐	COBBLE (65-256 mm) [12 pts]	15	☒☐	CLAY or HARDPAN [0 pt]	45
☐☒	GRAVEL (2-64 mm) [9 pts]	30	☐☐	MUCK [0 pts]	
☐☐	SAND (<2 mm) [6 pts]		☐☐	ARTIFICIAL [3 pts]	

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 15 (A) 9 (B) 4

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

HHEI Metric Points

Substrate Max = 40: 13

A + B

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):

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

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): 18

Pool Depth Max = 30: 25

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

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

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters): 1.2

Bankfull Width Max=30: 15

This information must also be completed

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

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

COMMENTS _____

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

- ☒ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS _____

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

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

STREAM GRADIENT ESTIMATE

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

October 24, 2002 Revision

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

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

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: Long Run Distance from Evaluated Stream 0.26 miles

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: New Boston NRCS Soil Map Page: 30 NRCS Soil Map Stream Order 1°

County: Scioto Township / City: Clarkstown OH

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 9/9/2011 Quantity: 0.14 in

Photograph Information: SEE ESR

Elevated Turbidity? (Y/N): N Canopy (% open): 10%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

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

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

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

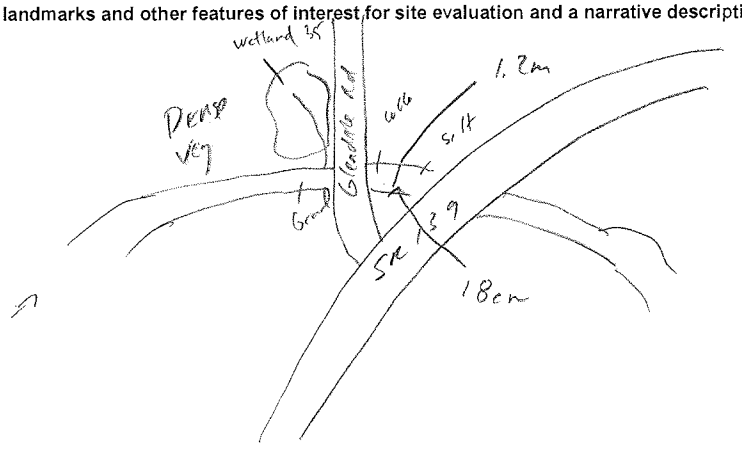
Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

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

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

FLOW



OhioEPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 37

SITE NAME/LOCATION STREAM 18-2-1

SITE NUMBER _____ RIVER BASIN _____ DRAINAGE AREA (mi²) 0.01 mi²

LENGTH OF STREAM REACH (ft) 100' LAT. 38.85159 LONG. 82.91139 RIVER CODE _____ RIVER MILE _____

DATE 9/13/2011 SCORER JME COMMENTS TRIB to 18-2 @ SR 139 & Glendale Rd.

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

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

1. 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.

TYPE		PERCENT	TYPE		PERCENT
☐☐	BLDR SLABS [16 pts]		☐☒	SILT [3 pt]	20
☐☐	BOULDER (>256 mm) [16 pts]		☐☐	LEAF PACK/WOODY DEBRIS [3 pts]	15
☐☐	BEDROCK [16 pt]		☐☐	FINE DETRITUS [3 pts]	
☐☐	COBBLE (65-256 mm) [12 pts]		☒☐	CLAY or HARDPAN [0 pt]	55
☐☐	GRAVEL (2-64 mm) [9 pts]	10	☐☐	MUCK [0 pts]	
☐☐	SAND (<2 mm) [6 pts]		☐☐	ARTIFICIAL [3 pts]	

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 0 (A) 3 (B) 4

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

HHEI Metric Points

Substrate Max = 40: 7

A + B

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):

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

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): 11

Pool Depth Max = 30: 25

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

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

COMMENTS _____ AVERAGE BANKFULL WIDTH (meters) 0.8

Bankfull Width Max=30: 5

This information must also be completed

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

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

COMMENTS _____

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

- ☒ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS _____

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

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

STREAM GRADIENT ESTIMATE

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

October 24, 2002 Revision

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

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

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: Long Run Distance from Evaluated Stream 0.26mile

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: New Boston NRCS Soil Map Page: 30 NRCS Soil Map Stream Order Not Mapped

County: Scioto Township / City: Clarktown

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 9/9/2011 Quantity: 0.14in

Photograph Information: See Esri

Elevated Turbidity? (Y/N): N Canopy (% open): 30

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

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

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

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

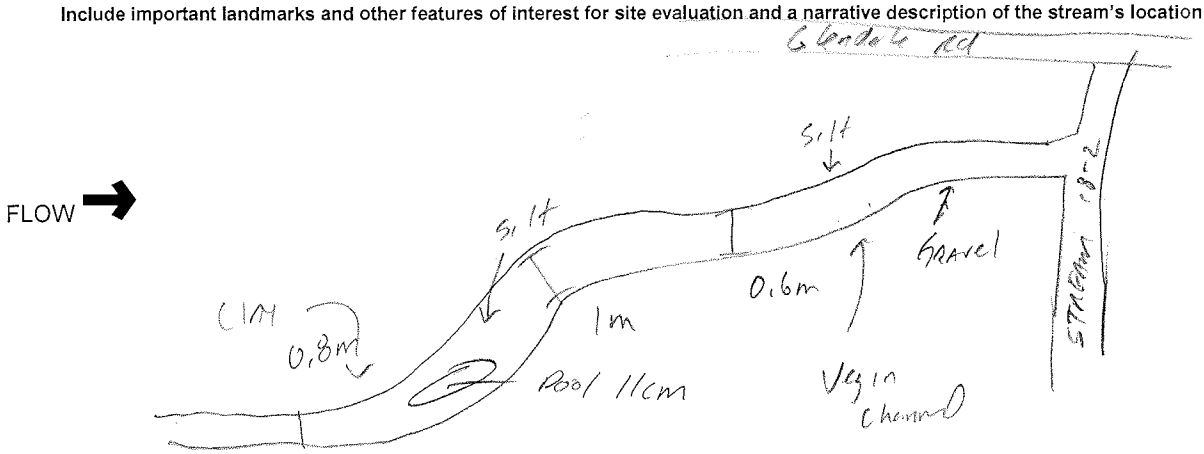
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

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

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



ORAM v. 5.0 Quantitative Rating Field Forms

ORAM v. 5.0 Field Form Quantitative Rating

Site: Wetland 1	Rater(s): Rick Paul	Date: 6/2/2011

Metric 1. Wetland Area (size).

1	1
max 6 pts.	subtotal

Select one size class and assign score.

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

Metric 2. Upland buffers and surrounding land use.

11	12
max 14 pts.	subtotal

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

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

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

(4)
- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [X] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [X] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [ ] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

7.5	19.5
max 30 pts.	subtotal

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

(1.5)
- [ ] Semi- to permanently inundated/saturated (4)
- [X] Regularly inundated/saturated (3)
- [X] Seasonally inundated (2)
- [X] Seasonally saturated in upper 30cm (12in) (1)

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

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

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

5	24.5
max 20 pts.	subtotal

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

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

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

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

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

(2)
- [ ] None or none apparent (9)
- [ ] Recovered (6)
- [X] Recovering (3)
- [X] Recent or no recovery (1)

Check all disturbances observed

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

24.5
subtotal this page

last revised 1 February 2001 jjm

Site: Wetland 1	Rater(s): Rick Paul	Date: 6/2/2011

24.5
subtotal first page

Metric 5. Special Wetlands.

0 | 24.5
max 10 pts. | subtotal

Check all that apply and score as indicated.

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

Metric 6. Plant communities, interspersion, microtopography.

-1 | 23.5
max 20 pts. | subtotal

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

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

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

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

(0)

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

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

(-1)

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

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

(0)

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

23.5

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM v. 5.0 Field Form Quantitative Rating

Site: Wetland 2/3	Rater(s): J. Earley / R. Paul	Date: 6/2/2011

Metric 1. Wetland Area (size).

max 6 pts. | subtotal: 2 | 2

Select one size class and assign score.

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

Metric 2. Upland buffers and surrounding land use.

max 14 pts. | subtotal: 11 | 13

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

(7)

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

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

(4)

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

Metric 3. Hydrology.

max 30 pts. | subtotal: 9.5 | 22.5

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

(1)

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

3b. Connectivity. Score all that apply.

(1)

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

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

(1)

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

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

(1.5)

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

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

(5)

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

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

max 20 pts. | subtotal: 8 | 30.5

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

(2.5)

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

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

(1)

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

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

(4.5)

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

Check all disturbances observed

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

subtotal this page: 30.5

last revised 1 February 2001 jjm

Site: Wetland 2/3	Rater(s): J. Earley / R. Paul	Date: 6/2/2011

30.5
subtotal first page

Metric 5. Special Wetlands.

0 (max 10 pts.) | 30.5 (subtotal)

Check all that apply and score as indicated.

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

Metric 6. Plant communities, interspersion, microtopography.

1 (max 20 pts.) | 31.5 (subtotal)

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

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

(1)

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

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

(0)

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

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

(-1)

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

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

(1)

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

31.5

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Wetland 4	Rater(s): Jason Earley	Date: 6/14/2011

Metric 1. Wetland Area (size).

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

Select one size class and assign score.

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

Metric 2. Upland buffers and surrounding land use.

11 (max 14 pts.) | 11 (subtotal)

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

(7)

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

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

(4)

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

Metric 3. Hydrology.

9.5 (max 30 pts.) | 20.5 (subtotal)

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

(1)

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

3b. Connectivity. Score all that apply.

(1)

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

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

(1)

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

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

(1.5)

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

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

(5)

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

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

8 (max 20 pts.) | 28.5 (subtotal)

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

(2.5)

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

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

(1)

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

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

(4.5)

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

Check all disturbances observed

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

28.5 subtotal this page

last revised 1 February 2001 jjm

Site: Wetland 4	Rater(s): J Earley	Date: 6/14/2011

28.5
subtotal first page

Metric 5. Special Wetlands.

0 (max 10 pts.) | 28.5 (subtotal)

Check all that apply and score as indicated.

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

Metric 6. Plant communities, interspersion, microtopography.

2 (max 20 pts.) | 30.5 (subtotal)

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

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

(0)

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

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

(0)

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

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

(1)

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

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

(1)

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

30.5

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM v. 5.0 Field Form Quantitative Rating

Site: WBWL6	Rater(s): J. EARley	Date: 6/14/2011

Metric 1. Wetland Area (size).

1	1
max 6 pts.	subtotal

Select one size class and assign score.

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

Metric 2. Upland buffers and surrounding land use.

11	12
max 14 pts.	subtotal

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

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

(7)

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

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

(4)

Metric 3. Hydrology.

9.5	21.5
max 30 pts.	subtotal

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

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

(1)

3b. Connectivity. Score all that apply.

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

(1)

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

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

(1)

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

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

(1.5)

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

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

(3)

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

8	29.5
max 20 pts.	subtotal

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

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

(2.5)

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

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

(1)

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

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

(4.5)

Check all disturbances observed

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

29.5
subtotal this page

last revised 1 February 2001 jjm

Site: W8WL6	Rater(s): J. Earley	Date: 6/14/2011

29.5
subtotal first page

Metric 5. Special Wetlands.

0 (max 10 pts.) | 29.5 (subtotal)

Check all that apply and score as indicated.

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

Metric 6. Plant communities, interspersion, microtopography.

3 (max 20 pts.) | 32.5 (subtotal)

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

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

(1)

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

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

(0)

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

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

(1)

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

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

(1)

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

32.5

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Wetland WB WL8	Rater(s): Jason Earley	Date: 6/14/2011

Metric 1. Wetland Area (size).

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

Select one size class and assign score.

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

Metric 2. Upland buffers and surrounding land use.

12 (max 14 pts.) | 12 (subtotal)

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

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

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

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

Metric 3. Hydrology.

14.5 (max 30 pts.) | 16.5 (subtotal)

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

(4)
- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [X] Precipitation (1)
- [X] Seasonal/Intermittent surface water (3)
- [ ] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

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

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

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

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

(1.5)
- [ ] Semi- to permanently inundated/saturated (4)
- [ ] Regularly inundated/saturated (3)
- [X] Seasonally inundated (2)
- [X] Seasonally saturated in upper 30cm (12in) (1)

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

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

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

11 (max 20 pts.) | 27.5 (subtotal)

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

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

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

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

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

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

Check all disturbances observed

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

27.5 (subtotal this page)

last revised 1 February 2001 jjm

Site: Wetland W8WL8	Rater(s): J. Earley	Date: 6/14/2011

27.5
subtotal first page

Metric 5. Special Wetlands.

0 (max 10 pts.) | 27.5 (subtotal)

Check all that apply and score as indicated.

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

Metric 6. Plant communities, interspersion, microtopography.

1 (max 20 pts.) | 28.5 (subtotal)

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

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

(0)

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

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

(0)

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

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

(1)

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

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

(0)

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

28.5

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM v. 5.0 Field Form Quantitative Rating

Site: Wetland 5 / WBWL7	Rater(s): J. Earley	Date: 6/14/2011

Metric 1. Wetland Area (size).

max 6 pts.	subtotal
1	1

Select one size class and assign score.

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

Metric 2. Upland buffers and surrounding land use.

max 14 pts.	subtotal
11	12

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

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

(7)

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

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

(4)

Metric 3. Hydrology.

max 30 pts.	subtotal
17	29

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

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

(6)

3b. Connectivity. Score all that apply.

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

(1)

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

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

(2)

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

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

(3)

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

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

(5)

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

max 20 pts.	subtotal
10.5	39.5

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

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

(2.5)

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

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

(2)

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

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

(6)

Check all disturbances observed

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

39.5
subtotal this page

last revised 1 February 2001 jjm

Site: Wetland 5 / WB WL7	Rater(s): J. Earley	Date: 6/14/2011

39.5
subtotal first page

0	39.5
max 10 pts.	subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

0	39.5
max 20 pts.	subtotal

Metric 6. Plant communities, interspersion, microtopography.

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

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

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

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

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

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

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

(2)
- [1] Vegetated hummucks/tussucks
- [ ] Coarse woody debris >15cm (6in)
- [ ] Standing dead >25cm (10in) dbh
- [1] Amphibian breeding pools

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

39.5

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Wetland 6	Rater(s): J. Earley	Date: 6/14/2011

Metric 1. Wetland Area (size).

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

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [x] <0.1 acres (0.04ha) (0 pts) 0.02

Metric 2. Upland buffers and surrounding land use.

11 (max 14 pts.) | 11 (subtotal)

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

(7)

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

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

(4)

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

Metric 3. Hydrology.

9.5 (max 30 pts.) | 20.5 (subtotal)

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

(1)

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

3b. Connectivity. Score all that apply.

(1)

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

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

(1)

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

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

(1.5)

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

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

(5)

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

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

8 (max 20 pts.) | 28.5 (subtotal)

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

(2.5)

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

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

(1)

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

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

(4.5)

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

Check all disturbances observed

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

28.5 subtotal this page

last revised 1 February 2001 jjm

Site: Wetland 6	Rater(s): J. Earley	Date: 6/14/2011

28.5
subtotal first page

Metric 5. Special Wetlands.

0 (max 10 pts.) | 28.5 (subtotal)

Check all that apply and score as indicated.

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

Metric 6. Plant communities, interspersion, microtopography.

2 (max 20 pts.) | 2 (subtotal)

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

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

(0)

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

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

(0)

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

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

(1)

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

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

(1)

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

30.5

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM v. 5.0 Field Form Quantitative Rating

Site: Wetland 7	Rater(s): Jason Early	Date: 6/14/2011

Metric 1. Wetland Area (size).

max 6 pts. | subtotal: 1 | 1

Select one size class and assign score.

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

Metric 2. Upland buffers and surrounding land use.

max 14 pts. | subtotal: 11 | 12

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

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

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

(4)
- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [X] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [X] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [ ] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

max 30 pts. | subtotal: 5 | 17

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

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

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

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

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

max 20 pts. | subtotal: 3 | 20

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

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

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

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

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

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

Check all disturbances observed

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

20
subtotal this page

last revised 1 February 2001 jjm

Site: Wetland 7	Rater(s): J. Earley	Date: 6/14/2011

20
subtotal first page

Metric 5. Special Wetlands.

0 (max 10 pts.) | 20 (subtotal)

Check all that apply and score as indicated.

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

Metric 6. Plant communities, interspersion, microtopography.

1 (max 20 pts.) | 21 (subtotal)

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

- [ ] Aquatic bed
- [O] Emergent
- [ ] Shrub
- [ ] Forest
- (1) [X] Mudflats
- [ ] Open water
- [ ] Other_____

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

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

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

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

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

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

21

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM v. 5.0 Field Form Quantitative Rating

Site: Wetland 8	Rater(s): Jason Earley	Date: 6/14/2011

Metric 1. Wetland Area (size).

max 6 pts.	subtotal
0	0

Select one size class and assign score.

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

Metric 2. Upland buffers and surrounding land use.

max 14 pts.	subtotal
11	11

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

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

(7)

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

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

(4)

Metric 3. Hydrology.

max 30 pts.	subtotal
9.5	20.5

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

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

(1)

3b. Connectivity. Score all that apply.

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

(1)

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

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

(1)

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

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

(1.5)

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

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

(5)

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

max 20 pts.	subtotal
8	28.5

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

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

(2.5)

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

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

(1)

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

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

(4.5)

Check all disturbances observed

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

28.5
subtotal this page

last revised 1 February 2001 jjm

Site: Wetland 8	Rater(s): J Earley	Date: 6/14/2011

28.5
subtotal first page

Metric 5. Special Wetlands.

0 (max 10 pts.) | 28.5 (subtotal)

Check all that apply and score as indicated.

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

Metric 6. Plant communities, interspersion, microtopography.

2 (max 20 pts.) | 30.5 (subtotal)

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

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

(0)

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

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

(0)

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

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

(1)

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

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

(1)

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

30.5

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Wetland 9	Rater(s): Jason Earley	Date: 6/15/2011

Metric 1. Wetland Area (size).

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

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [X] <0.1 acres (0.04ha) (0 pts) 0.08ac

Metric 2. Upland buffers and surrounding land use.

11 (max 14 pts.) | 11 (subtotal)

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

(7)

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

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

(4)

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

Metric 3. Hydrology.

12.5 (max 30 pts.) | 23.5 (subtotal)

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

(4)

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

3b. Connectivity. Score all that apply.

(1)

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

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

(1)

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

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

(1.5)

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

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

(5)

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

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

8 (max 20 pts.) | 31.5 (subtotal)

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

(2.5)

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

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

(1)

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

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

(4.5)

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

Check all disturbances observed

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

31.5 subtotal this page

last revised 1 February 2001 jjm

Site: Wetland 9	Rater(s): J. Earley	Date: 6/15/2011

31.5
subtotal first page

Metric 5. Special Wetlands.

0 (max 10 pts.) | 31.5 (subtotal)

Check all that apply and score as indicated.

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

Metric 6. Plant communities, interspersion, microtopography.

4 (max 20 pts.) | 35.5 (subtotal)

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

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

(0)

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

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

(1)

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

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

(1)

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

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

(2)

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

35.5

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM v. 5.0 Field Form Quantitative Rating

Site: Wetland 12	Rater(s): Rick Paul	Date: 6-16-2011

Metric 1. Wetland Area (size).

2 (max 6 pts.) | 2 (subtotal)

Select one size class and assign score.

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

Metric 2. Upland buffers and surrounding land use.

11 (max 14 pts.) | 13 (subtotal)

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

(7)

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

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

(4)

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

Metric 3. Hydrology.

14 (max 30 pts.) | 27 (subtotal)

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

(1)

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

3b. Connectivity. Score all that apply.

(1)

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

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

(1)

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

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

(1.5)

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

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

(9.5)

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

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

9 (max 20 pts.) | 36 (subtotal)

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

(2.5)

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

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

(2)

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

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

(4.5)

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

Check all disturbances observed

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

36 (subtotal this page)

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Site: Wetland 12	Rater(s): Rick Paul	Date: 6-16-2011

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subtotal first page

Metric 5. Special Wetlands.

0 (max 10 pts.) | 36 (subtotal)

Check all that apply and score as indicated.

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

Metric 6. Plant communities, interspersion, microtopography.

3 (max 20 pts.) | 39 (subtotal)

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

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

(1)

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

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

(1)

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

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

(1)

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

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

(0)

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

39

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Wetland 13	Rater(s): Rick Paul	Date: 6-16-2011

Metric 1. Wetland Area (size).

1	1
max 6 pts.	subtotal

Select one size class and assign score.

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

Metric 2. Upland buffers and surrounding land use.

8	9
max 14 pts.	subtotal

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

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

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

(4)
- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [x] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [x] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [ ] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

14	23
max 30 pts.	subtotal

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

(1.5)
- [ ] Semi- to permanently inundated/saturated (4)
- [ ] Regularly inundated/saturated (3)
- [x] Seasonally inundated (2)
- [x] Seasonally saturated in upper 30cm (12in) (1)

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

(9.5)
- [x] None or none apparent (12)
- [x] Recovered (7)
- [ ] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

9	32
max 20 pts.	subtotal

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

(2.5)
- [ ] None or none apparent (4)
- [x] Recovered (3)
- [x] Recovering (2)
- [ ] Recent or no recovery (1)

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

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

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

(4.5)
- [ ] None or none apparent (9)
- [x] Recovered (6)
- [x] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

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

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subtotal this page

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Site: Wetland 13	Rater(s): Rick Paul	Date: 6-16-2011

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subtotal first page

Metric 5. Special Wetlands.

0 max 10 pts. | 32 subtotal

Check all that apply and score as indicated.

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

Metric 6. Plant communities, interspersion, microtopography.

3 max 20 pts. | 35 subtotal

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

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

(1)

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

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

(1)

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

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

(1)

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

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

(0)

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

35

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Wetland 14	Rater(s): Rick Paul	Date: 6-16-2011

Metric 1. Wetland Area (size).

0	0
max 6 pts.	subtotal

Select one size class and assign score.

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

Metric 2. Upland buffers and surrounding land use.

5	5
max 14 pts.	subtotal

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

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

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

(4)
- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [X] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [X] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [ ] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

7.5	12.5
max 30 pts.	subtotal

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

(1.5)
- [ ] Semi- to permanently inundated/saturated (4)
- [ ] Regularly inundated/saturated (3)
- [X] Seasonally inundated (2)
- [X] Seasonally saturated in upper 30cm (12in) (1)

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

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

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

5	17.5
max 20 pts.	subtotal

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

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

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

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

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

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

Check all disturbances observed

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

17.5
subtotal this page

last revised 1 February 2001 jjm

Site: Wetland 14	Rater(s): Rick Paul	Date: 6-16-2011

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subtotal first page

Metric 5. Special Wetlands.

0 (max 10 pts.) | 17.5 (subtotal)

Check all that apply and score as indicated.

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

Metric 6. Plant communities, interspersion, microtopography.

2 (max 20 pts.) | 19.5 (subtotal)

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

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

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

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

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

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

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

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

19.5

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM v. 5.0 Field Form Quantitative Rating

Site: Wetland 15	Rater(s): Rick Paul	Date: 6-16-2011

Metric 1. Wetland Area (size).

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

Select one size class and assign score.

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

Metric 2. Upland buffers and surrounding land use.

11 (max 14 pts.) | 11 (subtotal)

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

7

- [x] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [ ] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [ ] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [ ] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

4

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [x] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [x] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [ ] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

14 (max 30 pts.) | 25 (subtotal)

3a. Sources of Water. Score all that apply.

1

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [x] Precipitation (1)
- [ ] Seasonal/Intermittent surface water (3)
- [ ] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

1

- [ ] 100 year floodplain (1)
- [ ] Between stream/lake and other human use (1)
- [ ] Part of wetland/upland (e.g. forest), complex (1)
- [x] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only one and assign score.

1

- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [x] <0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

1.5

- [ ] Semi- to permanently inundated/saturated (4)
- [ ] Regularly inundated/saturated (3)
- [x] Seasonally inundated (2)
- [x] Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

9.5

- [x] None or none apparent (12)
- [x] Recovered (7)
- [ ] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [x] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [x] filling/grading
- [ ] road bed/RR track
- [ ] dredging
- [ ] other_____

Metric 4. Habitat Alteration and Development.

6.5 (max 20 pts.) | 31.5 (subtotal)

4a. Substrate disturbance. Score one or double check and average.

3.5

- [x] None or none apparent (4)
- [x] Recovered (3)
- [ ] Recovering (2)
- [ ] Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

1

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [ ] Poor to fair (2)
- [x] Poor (1)

4c. Habitat alteration. Score one or double check and average.

2

- [ ] None or none apparent (9)
- [ ] Recovered (6)
- [x] Recovering (3)
- [x] Recent or no recovery (1)

Check all disturbances observed

- [x] mowing
- [x] grazing
- [ ] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [ ] sedimentation
- [ ] dredging
- [x] farming
- [ ] nutrient enrichment

31.5 (subtotal this page)

last revised 1 February 2001 jjm

Site: Wetland 15	Rater(s): Rick Paul	Date: 6-16-2011

31.5
subtotal first page

Metric 5. Special Wetlands.

0 (max 10 pts.) | 31.5 (subtotal)

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Prairies (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 1 Qualitative Rating (-10)

Metric 6. Plant communities, interspersion, microtopography.

2 (max 20 pts.) | 33.5 (subtotal)

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

(0)

- [ ] Aquatic bed
- [O] Emergent
- [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.
Select only one.

(1)

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [X] Low (1)
- [ ] None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

(1)

- [ ] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [X] Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

(0)

- [ ] Vegetated hummucks/tussucks
- [ ] Coarse woody debris >15cm (6in)
- [ ] Standing dead >25cm (10in) dbh
- [ ] Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

33.5

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM v. 5.0 Field Form Quantitative Rating

Site: Wetland 16	Rater(s): Jason Earley	Date: 6-21-2011

Metric 1. Wetland Area (size).

max 6 pts. | subtotal: 0 | 0

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [X] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

max 14 pts. | subtotal: 3 | 3

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- [ ] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [ ] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [ ] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [X] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

0

2b. Intensity of surrounding land use. Select one or double check and average.

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [ ] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [X] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [ ] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

3

Metric 3. Hydrology.

max 30 pts. | subtotal: 15.5 | 18.5

3a. Sources of Water. Score all that apply.

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [X] Precipitation (1)
- [X] Seasonal/Intermittent surface water (3)
- [ ] Perennial surface water (lake or stream) (5)

4

3b. Connectivity. Score all that apply.

- [ ] 100 year floodplain (1)
- [ ] Between stream/lake and other human use (1)
- [ ] Part of wetland/upland (e.g. forest), complex (1)
- [X] Part of riparian or upland corridor (1)

1

3c. Maximum water depth. Select only one and assign score.

- [ ] >0.7 (27.6in) (3)
- [X] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [ ] <0.4m (<15.7in) (1)

2

3d. Duration inundation/saturation. Score one or dbl check.

- [ ] Semi- to permanently inundated/saturated (4)
- [ ] Regularly inundated/saturated (3)
- [X] Seasonally inundated (2)
- [X] Seasonally saturated in upper 30cm (12in) (1)

1.5

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- [ ] None or none apparent (12)
- [X] Recovered (7)
- [ ] Recovering (3)
- [ ] Recent or no recovery (1)

7

Check all disturbances observed

- [X] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [X] filling/grading
- [ ] road bed/RR track
- [ ] dredging
- [ ] other_____

Metric 4. Habitat Alteration and Development.

max 20 pts. | subtotal: 9.5 | 28

4a. Substrate disturbance. Score one or double check and average.

- [ ] None or none apparent (4)
- [X] Recovered (3)
- [ ] Recovering (2)
- [ ] Recent or no recovery (1)

3

4b. Habitat development. Select only one and assign score.

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [X] Poor to fair (2)
- [ ] Poor (1)

2

4c. Habitat alteration. Score one or double check and average.

- [ ] None or none apparent (9)
- [X] Recovered (6)
- [X] Recovering (3)
- [ ] Recent or no recovery (1)

4.5

Check all disturbances observed

- [X] mowing
- [X] grazing
- [ ] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [X] sedimentation
- [ ] dredging
- [ ] farming
- [ ] nutrient enrichment

28

subtotal this page

last revised 1 February 2001 jjm

Site: Wetland 16	Rater(s): J. Earley	Date: 6-21-2011

28
subtotal first page

Metric 5. Special Wetlands.

0 (max 10 pts.) | 28 (subtotal)

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Prairies (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 1 Qualitative Rating (-10)

Metric 6. Plant communities, interspersion, microtopography.

-2 (max 20 pts.) | 26 (subtotal)

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

(1)
- [ ] Aquatic bed
- [1] Emergent
- [0] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.
Select only one.

(0)
- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [ ] Low (1)
- [X] None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

(-5)
- [X] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [ ] Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

(2)
- [1] Vegetated hummucks/tussucks
- [ ] Coarse woody debris >15cm (6in)
- [ ] Standing dead >25cm (10in) dbh
- [1] Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

26

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM v. 5.0 Field Form Quantitative Rating

Site: Wetland 17	Rater(s): J. EARLEY	Date: 6/21/2011

Metric 1. Wetland Area (size).

0 (max 6 pts.) | 0 (subtotal)

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [X] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

11 (max 14 pts.) | 11 (subtotal)

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

(7)

- [X] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [ ] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [ ] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [ ] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

(4)

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [X] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [X] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [ ] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

12 (max 30 pts.) | 23 (subtotal)

3a. Sources of Water. Score all that apply.

(1)

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [X] Precipitation (1)
- [ ] Seasonal/Intermittent surface water (3)
- [ ] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

(2)

- [ ] 100 year floodplain (1)
- [X] Between stream/lake and other human use (1)
- [X] Part of wetland/upland (e.g. forest), complex (1)
- [ ] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only one and assign score.

(1)

- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [X] <0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

(1)

- [ ] Semi- to permanently inundated/saturated (4)
- [ ] Regularly inundated/saturated (3)
- [ ] Seasonally inundated (2)
- [X] Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

(7)

- [ ] None or none apparent (12)
- [X] Recovered (7)
- [ ] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [ ] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [ ] filling/grading
- [ ] road bed/RR track
- [ ] dredging
- [ ] other_____

Metric 4. Habitat Alteration and Development.

9.5 (max 20 pts.) | 32.5 (subtotal)

4a. Substrate disturbance. Score one or double check and average.

(3)

- [ ] None or none apparent (4)
- [X] Recovered (3)
- [ ] Recovering (2)
- [ ] Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

(2)

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [X] Poor to fair (2)
- [ ] Poor (1)

4c. Habitat alteration. Score one or double check and average.

(4.5)

- [ ] None or none apparent (9)
- [X] Recovered (6)
- [X] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [X] mowing
- [X] grazing
- [ ] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [ ] sedimentation
- [ ] dredging
- [ ] farming
- [ ] nutrient enrichment

32.5 (subtotal this page)

last revised 1 February 2001 jjm

Site: Wetland 17	Rater(s): J. Earley	Date: 6/21/2011

32.5
subtotal first page

Metric 5. Special Wetlands.

0 (max 10 pts.) | 32.5 (subtotal)

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Prairies (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 1 Qualitative Rating (-10)

Metric 6. Plant communities, interspersion, microtopography.

3 (max 20 pts.) | 35.5 (subtotal)

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [1] Emergent
- [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

(1)

6b. horizontal (plan view) Interspersion.
Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [ ] Low (1)
- [X] None (0)

(0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- [ ] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [X] Absent (1)

(1)

6d. Microtopography.
Score all present using 0 to 3 scale.

- [1] Vegetated hummucks/tussucks
- [ ] Coarse woody debris >15cm (6in)
- [ ] Standing dead >25cm (10in) dbh
- [ ] Amphibian breeding pools

(1)

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

35.5

End of Quantitative Rating. Complete Categorization Worksheets.

Site: W9 WL2 / Wetland 18	Rater(s): J. Earley	Date: 6/21/2011

Metric 1. Wetland Area (size).

max 6 pts. | subtotal: 0 | 0

Select one size class and assign score.

(0)
- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [x] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

max 14 pts. | subtotal: 11 | 11

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

(7)
- [x] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [ ] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [ ] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [ ] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

(4)
- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [x] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [x] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [ ] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

max 30 pts. | subtotal: 12 | 23

3a. Sources of Water. Score all that apply.

(4)
- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [x] Precipitation (1)
- [x] Seasonal/Intermittent surface water (3)
- [ ] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.
- [ ] 100 year floodplain (1)
- [ ] Between stream/lake and other human use (1)
- [ ] Part of wetland/upland (e.g. forest), complex (1)
- [ ] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only one and assign score.

(1)
- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [x] <0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.
- [ ] Semi- to permanently inundated/saturated (4)
- [ ] Regularly inundated/saturated (3)
- [ ] Seasonally inundated (2)
- [ ] Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

(7)
- [ ] None or none apparent (12)
- [x] Recovered (7)
- [ ] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed
- [x] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [x] point source (nonstormwater)
- [x] filling/grading
- [ ] road bed/RR track
- [ ] dredging
- [ ] other_____

Metric 4. Habitat Alteration and Development.

max 20 pts. | subtotal: 8.5 | 31.5

4a. Substrate disturbance. Score one or double check and average.

(3)
- [ ] None or none apparent (4)
- [x] Recovered (3)
- [ ] Recovering (2)
- [ ] Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

(1)
- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [ ] Poor to fair (2)
- [x] Poor (1)

4c. Habitat alteration. Score one or double check and average.

(4.5)
- [ ] None or none apparent (9)
- [x] Recovered (6)
- [x] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed
- [x] mowing
- [x] grazing
- [ ] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [x] sedimentation
- [ ] dredging
- [ ] farming
- [ ] nutrient enrichment

31.5
subtotal this page

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Site: W9WL2 / Wetland 18	Rater(s): J. Earley	Date: 6/21/2011

31.5
subtotal first page

Metric 5. Special Wetlands.

0 (max 10 pts.) | 31.5 (subtotal)

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Prairies (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 1 Qualitative Rating (-10)

Metric 6. Plant communities, interspersion, microtopography.

4 (max 20 pts.) | 35.5 (subtotal)

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

(1)
- [ ] Aquatic bed
- [1] Emergent
- [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.
Select only one.

(1)
- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [X] Low (1)
- [ ] None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

0
- [ ] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [X] Nearly absent <5% cover (0)
- [ ] Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

(2)
- [1] Vegetated hummucks/tussucks
- [ ] Coarse woody debris >15cm (6in)
- [ ] Standing dead >25cm (10in) dbh
- [1] Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

35.5

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM v. 5.0 Field Form Quantitative Rating

Site: Wetland 19-Fringe & Pond 6	Rater(s): Rick Parl	Date: 6/22/2011

Metric 1. Wetland Area (size).

max 6 pts.	subtotal
1	1

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [X] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [ ] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

max 14 pts.	subtotal
11	12

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

(7)

- [X] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [ ] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [ ] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [ ] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

(4)

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [X] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [X] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [ ] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

max 30 pts.	subtotal
25	37

3a. Sources of Water. Score all that apply.

(6)

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [X] Precipitation (1)
- [ ] Seasonal/Intermittent surface water (3)
- [X] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

(1)

- [ ] 100 year floodplain (1)
- [X] Between stream/lake and other human use (1)
- [ ] Part of wetland/upland (e.g. forest), complex (1)
- [ ] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only one and assign score.

(2)

- [ ] >0.7 (27.6in) (3)
- [X] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [ ] <0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

(4)

- [X] Semi- to permanently inundated/saturated (4)
- [ ] Regularly inundated/saturated (3)
- [ ] Seasonally inundated (2)
- [ ] Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

(12)

- [X] None or none apparent (12)
- [ ] Recovered (7)
- [ ] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [ ] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [ ] filling/grading
- [ ] road bed/RR track
- [ ] dredging
- [ ] other_____

Metric 4. Habitat Alteration and Development.

max 20 pts.	subtotal
11	48

4a. Substrate disturbance. Score one or double check and average.

(3)

- [ ] None or none apparent (4)
- [X] Recovered (3)
- [ ] Recovering (2)
- [ ] Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

(2)

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [X] Poor to fair (2)
- [ ] Poor (1)

4c. Habitat alteration. Score one or double check and average.

(6)

- [ ] None or none apparent (9)
- [X] Recovered (6)
- [ ] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [ ] mowing
- [ ] grazing
- [ ] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [X] sedimentation
- [ ] dredging
- [ ] farming
- [ ] nutrient enrichment

48

subtotal this page

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Site: Wetland 19 - Fringe Pond 6	Rater(s): Rick Paul	Date: 6/22/2011

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subtotal first page

0	48
max 10 pts.	subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Prairies (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 1 Qualitative Rating (-10)

1	49
max 20 pts.	subtotal

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [1] Emergent
- [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

(1)

6b. horizontal (plan view) Interspersion.
Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [ ] Low (1)
- [X] None (0)

0

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- [ ] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [X] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [ ] Absent (1)

(-1)

6d. Microtopography.
Score all present using 0 to 3 scale.

- [ ] Vegetated hummucks/tussucks
- [ ] Coarse woody debris >15cm (6in)
- [ ] Standing dead >25cm (10in) dbh
- [1] Amphibian breeding pools

(1)

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

49

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Wetland 20	Rater(s): Rick Paul	Date: 6/22/2011

Metric 1. Wetland Area (size).

0 (max 6 pts.) | 0 (subtotal)

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [x] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

10 (max 14 pts.) | 10 (subtotal)

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

(7)

- [x] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [ ] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [ ] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [ ] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

(3)

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [ ] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [x] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [ ] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

18 (max 30 pts.) | 28 (subtotal)

3a. Sources of Water. Score all that apply.

(1)

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [x] Precipitation (1)
- [ ] Seasonal/Intermittent surface water (3)
- [ ] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

(1)

- [ ] 100 year floodplain (1)
- [ ] Between stream/lake and other human use (1)
- [x] Part of wetland/upland (e.g. forest), complex (1)
- [ ] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only one and assign score.

(1)

- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [x] <0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

(3)

- [ ] Semi- to permanently inundated/saturated (4)
- [x] Regularly inundated/saturated (3)
- [ ] Seasonally inundated (2)
- [ ] Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

(12)

- [x] None or none apparent (12)
- [ ] Recovered (7)
- [ ] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [ ] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [ ] filling/grading
- [ ] road bed/RR track
- [ ] dredging
- [ ] other_____

Metric 4. Habitat Alteration and Development.

6 (max 20 pts.) | 34 (subtotal)

4a. Substrate disturbance. Score one or double check and average.

(4)

- [x] None or none apparent (4)
- [ ] Recovered (3)
- [ ] Recovering (2)
- [ ] Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

(1)

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [ ] Poor to fair (2)
- [x] Poor (1)

4c. Habitat alteration. Score one or double check and average.

(1)

- [ ] None or none apparent (9)
- [ ] Recovered (6)
- [ ] Recovering (3)
- [x] Recent or no recovery (1)

Check all disturbances observed

- [x] mowing
- [x] grazing
- [ ] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [ ] sedimentation
- [ ] dredging
- [ ] farming
- [ ] nutrient enrichment

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Site: Wetland 20	Rater(s): Rick Paul	Date: 6/22/2011

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subtotal first page

Metric 5. Special Wetlands.

0 max 10 pts. | 34 subtotal

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Prairies (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 1 Qualitative Rating (-10)

Metric 6. Plant communities, interspersion, microtopography.

3 max 20 pts. | 37 subtotal

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

(1)
- [ ] Aquatic bed
- [1] Emergent
- [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.
Select only one.

(0)
- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [ ] Low (1)
- [X] None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

(1)
- [ ] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [X] Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

(1)
- [ ] Vegetated hummucks/tussucks
- [ ] Coarse woody debris >15cm (6in)
- [ ] Standing dead >25cm (10in) dbh
- [1] Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

37

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Wetland 21	Rater(s): Rick Paul	Date: 6/22/2011

Metric 1. Wetland Area (size).

0 (max 6 pts.) | 0 (subtotal)

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [X] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

7 (max 14 pts.) | 7 (subtotal)

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- [ ] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- (4) [X] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [ ] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [ ] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- (3) [ ] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [X] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [ ] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

17 (max 30 pts.) | 24 (subtotal)

3a. Sources of Water. Score all that apply.

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- (1) [X] Precipitation (1)
- [ ] Seasonal/Intermittent surface water (3)
- [ ] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

- [ ] 100 year floodplain (1)
- [ ] Between stream/lake and other human use (1)
- (1) [X] Part of wetland/upland (e.g. forest), complex (1)
- [ ] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only one and assign score.

- [ ] >0.7 (27.6in) (3)
- (1) [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [X] <0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

- [ ] Semi- to permanently inundated/saturated (4)
- [ ] Regularly inundated/saturated (3)
- (2) [X] Seasonally inundated (2)
- [ ] Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- (12) [X] None or none apparent (12)
- [ ] Recovered (7)
- [ ] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [ ] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [ ] filling/grading
- [ ] road bed/RR track
- [ ] dredging
- [ ] other_____

Metric 4. Habitat Alteration and Development.

3 (max 20 pts.) | 27 (subtotal)

4a. Substrate disturbance. Score one or double check and average.

- (1) [ ] None or none apparent (4)
- [ ] Recovered (3)
- [ ] Recovering (2)
- [X] Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- [ ] Excellent (7)
- [ ] Very good (6)
- (1) [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [ ] Poor to fair (2)
- [X] Poor (1)

4c. Habitat alteration. Score one or double check and average.

- (1) [ ] None or none apparent (9)
- [ ] Recovered (6)
- [ ] Recovering (3)
- [X] Recent or no recovery (1)

Check all disturbances observed

- [X] mowing
- [X] grazing
- [ ] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [ ] sedimentation
- [ ] dredging
- [X] farming
- [ ] nutrient enrichment

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Site: Wetland 21	Rater(s): Rick Paul	Date: 6/22/2011

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subtotal first page

0 | 27
max 10 pts. | subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Prairies (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 1 Qualitative Rating (-10)

1 | 28
max 20 pts. | subtotal

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [0] Emergent
- (0) [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.
Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- (0) [ ] Moderately low (2)
- [ ] Low (1)
- [X] None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- [ ] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- (1) [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [X] Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

- [ ] Vegetated hummucks/tussucks
- (0) [ ] Coarse woody debris >15cm (6in)
- [ ] Standing dead >25cm (10in) dbh
- [ ] Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

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End of Quantitative Rating. Complete Categorization Worksheets.

Site: WQWL4	Rater(s): Rick Paul	Date: 6/22/2011

Metric 1. Wetland Area (size).

0 (max 6 pts.) | 0 (subtotal)

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [x] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

10 (max 14 pts.) | 10 (subtotal)

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

(7)

- [x] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [ ] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [ ] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [ ] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

(3)

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [ ] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [x] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [ ] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

17 (max 30 pts.) | 27 (subtotal)

3a. Sources of Water. Score all that apply.

(1)

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [x] Precipitation (1)
- [ ] Seasonal/Intermittent surface water (3)
- [ ] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

(1)

- [ ] 100 year floodplain (1)
- [x] Between stream/lake and other human use (1)
- [ ] Part of wetland/upland (e.g. forest), complex (1)
- [ ] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only one and assign score.

(1)

- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [x] <0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

(2)

- [ ] Semi- to permanently inundated/saturated (4)
- [ ] Regularly inundated/saturated (3)
- [x] Seasonally inundated (2)
- [ ] Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

(12)

- [x] None or none apparent (12)
- [ ] Recovered (7)
- [ ] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [ ] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [ ] filling/grading
- [ ] road bed/RR track
- [ ] dredging
- [ ] other_____

Metric 4. Habitat Alteration and Development.

6 (max 20 pts.) | 33 (subtotal)

4a. Substrate disturbance. Score one or double check and average.

(4)

- [x] None or none apparent (4)
- [ ] Recovered (3)
- [ ] Recovering (2)
- [ ] Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

(1)

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [ ] Poor to fair (2)
- [x] Poor (1)

4c. Habitat alteration. Score one or double check and average.

(1)

- [ ] None or none apparent (9)
- [ ] Recovered (6)
- [ ] Recovering (3)
- [x] Recent or no recovery (1)

Check all disturbances observed

- [x] mowing
- [x] grazing
- [ ] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [ ] sedimentation
- [ ] dredging
- [x] farming
- [ ] nutrient enrichment

33 (subtotal this page)

last revised 1 February 2001 jjm

Site: W9WL4	Rater(s): Rick Paul	Date: 6/22/2011

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subtotal first page

0 | 33
max 10 pts. | subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Prairies (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 1 Qualitative Rating (-10)

1 | 34
max 20 pts. | subtotal

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

(0)
- [ ] Aquatic bed
- [o] Emergent
- [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.
Select only one.

(0)
- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [ ] Low (1)
- [X] None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

(1)
- [ ] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [X] Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

(0)
- [ ] Vegetated hummucks/tussucks
- [ ] Coarse woody debris >15cm (6in)
- [ ] Standing dead >25cm (10in) dbh
- [ ] Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

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End of Quantitative Rating. Complete Categorization Worksheets.

ORAM v. 5.0 Field Form Quantitative Rating

Site: Wetland 22 - Fringe Pond 7	Rater(s): Rick Paul	Date: 6/22/2011

Metric 1. Wetland Area (size).

0 (max 6 pts.) | 0 (subtotal)

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [x] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

4 (max 14 pts.) | 4 (subtotal)

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- [ ] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [ ] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- (1) [x] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [ ] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [ ] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- (3) [x] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [ ] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

18 (max 30 pts.) | 22 (subtotal)

3a. Sources of Water. Score all that apply.

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- (6) [x] Precipitation (1)
- [ ] Seasonal/Intermittent surface water (3)
- [x] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

- [ ] 100 year floodplain (1)
- (1) [x] Between stream/lake and other human use (1)
- [ ] Part of wetland/upland (e.g. forest), complex (1)
- [ ] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only one and assign score.

- [ ] >0.7 (27.6in) (3)
- (1) [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [x] <0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

- [ ] Semi- to permanently inundated/saturated (4)
- (3) [x] Regularly inundated/saturated (3)
- [ ] Seasonally inundated (2)
- [ ] Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- [ ] None or none apparent (12)
- (7) [x] Recovered (7)
- [ ] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [ ] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [ ] filling/grading
- [ ] road bed/RR track
- [ ] dredging
- [ ] other_____

Metric 4. Habitat Alteration and Development.

7 (max 20 pts.) | 29 (subtotal)

4a. Substrate disturbance. Score one or double check and average.

- [ ] None or none apparent (4)
- (3) [x] Recovered (3)
- [ ] Recovering (2)
- [ ] Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- (1) [ ] Fair (3)
- [ ] Poor to fair (2)
- [x] Poor (1)

4c. Habitat alteration. Score one or double check and average.

- [ ] None or none apparent (9)
- (3) [ ] Recovered (6)
- [x] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [x] mowing
- [ ] grazing
- [ ] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [ ] sedimentation
- [ ] dredging
- [ ] farming
- [ ] nutrient enrichment

29 (subtotal this page)

last revised 1 February 2001 jjm

Site: Wetland 22 - Fringe Pond 7	Rater(s): Rick Paul	Date: 6/22/2011

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subtotal first page

Metric 5. Special Wetlands.

0 (max 10 pts.) | 29 (subtotal)

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Prairies (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 1 Qualitative Rating (-10)

Metric 6. Plant communities, interspersion, microtopography.

-1 (max 20 pts.) | 28 (subtotal)

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [0] Emergent
- (0) [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.
Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- (1) [ ] Moderately low (2)
- [X] Low (1)
- [ ] None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- [ ] Extensive >75% cover (-5)
- [X] Moderate 25-75% cover (-3)
- (-3) [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [ ] Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

- [ ] Vegetated hummucks/tussucks
- (1) [ ] Coarse woody debris >15cm (6in)
- [ ] Standing dead >25cm (10in) dbh
- [1] Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

28

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM v. 5.0 Field Form Quantitative Rating

Site: Wetland 24	Rater(s): Rick Paul	Date: 6/23/2011

Metric 1. Wetland Area (size).

0	0
max 6 pts.	subtotal

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [x] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

6	6
max 14 pts.	subtotal

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- [ ] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [x] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [ ] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [ ] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

4

2b. Intensity of surrounding land use. Select one or double check and average.

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [ ] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [x] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [x] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

2

Metric 3. Hydrology.

13	19
max 30 pts.	subtotal

3a. Sources of Water. Score all that apply.

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [x] Precipitation (1)
- [ ] Seasonal/Intermittent surface water (3)
- [ ] Perennial surface water (lake or stream) (5)

(1)

3b. Connectivity. Score all that apply.

- [ ] 100 year floodplain (1)
- [ ] Between stream/lake and other human use (1)
- [x] Part of wetland/upland (e.g. forest), complex (1)
- [ ] Part of riparian or upland corridor (1)

(1)

3c. Maximum water depth. Select only one and assign score.

- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [x] <0.4m (<15.7in) (1)

(1)

3d. Duration inundation/saturation. Score one or dbl check.

- [ ] Semi- to permanently inundated/saturated (4)
- [x] Regularly inundated/saturated (3)
- [ ] Seasonally inundated (2)
- [ ] Seasonally saturated in upper 30cm (12in) (1)

(3)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- [ ] None or none apparent (12)
- [x] Recovered (7)
- [ ] Recovering (3)
- [ ] Recent or no recovery (1)

(7)

Check all disturbances observed

- [ ] ditch
- [x] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [ ] filling/grading
- [ ] road bed/RR track
- [ ] dredging
- [ ] other_____

Metric 4. Habitat Alteration and Development.

7	26
max 20 pts.	subtotal

4a. Substrate disturbance. Score one or double check and average.

- [ ] None or none apparent (4)
- [x] Recovered (3)
- [ ] Recovering (2)
- [ ] Recent or no recovery (1)

(3)

4b. Habitat development. Select only one and assign score.

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [ ] Poor to fair (2)
- [x] Poor (1)

(1)

4c. Habitat alteration. Score one or double check and average.

- [ ] None or none apparent (9)
- [ ] Recovered (6)
- [x] Recovering (3)
- [ ] Recent or no recovery (1)

(3)

Check all disturbances observed

- [x] mowing
- [x] grazing
- [ ] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [ ] sedimentation
- [ ] dredging
- [x] farming
- [ ] nutrient enrichment

26
subtotal this page

last revised 1 February 2001 jjm

Site: Wetland 24	Rater(s): Rick Paul	Date: 6/23/2011

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subtotal first page

Metric 5. Special Wetlands.

0 (max 10 pts.) | 26 (subtotal)

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Prairies (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 1 Qualitative Rating (-10)

Metric 6. Plant communities, interspersion, microtopography.

3 (max 20 pts.) | 29 (subtotal)

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [1] Emergent
- [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

(1)

6b. horizontal (plan view) Interspersion.
Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [X] Low (1)
- [ ] None (0)

(1)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- [ ] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [X] Absent (1)

(1)

6d. Microtopography.
Score all present using 0 to 3 scale.

- [ ] Vegetated hummucks/tussucks
- [ ] Coarse woody debris >15cm (6in)
- [ ] Standing dead >25cm (10in) dbh
- [ ] Amphibian breeding pools

(0)

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

29

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM v. 5.0 Field Form Quantitative Rating

Site: Wetland 26	Rater(s): Rick Paul	Date: 6/23/2011

Metric 1. Wetland Area (size).

2 (max 6 pts.) | 2 (subtotal)

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [x] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [ ] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

3 (max 14 pts.) | 5 (subtotal)

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

(1)

- [ ] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [ ] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [x] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [ ] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

(2)

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [ ] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [x] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [x] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

13 (max 30 pts.) | 18 (subtotal)

3a. Sources of Water. Score all that apply.

(1)

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [x] Precipitation (1)
- [ ] Seasonal/Intermittent surface water (3)
- [ ] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

(1)

- [ ] 100 year floodplain (1)
- [ ] Between stream/lake and other human use (1)
- [x] Part of wetland/upland (e.g. forest), complex (1)
- [ ] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only one and assign score.

(1)

- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [x] <0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

(3)

- [ ] Semi- to permanently inundated/saturated (4)
- [x] Regularly inundated/saturated (3)
- [ ] Seasonally inundated (2)
- [ ] Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

(7)

- [ ] None or none apparent (12)
- [x] Recovered (7)
- [ ] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [x] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [ ] filling/grading
- [ ] road bed/RR track
- [ ] dredging
- [ ] other_____

Metric 4. Habitat Alteration and Development.

7 (max 20 pts.) | 25 (subtotal)

4a. Substrate disturbance. Score one or double check and average.

(3)

- [ ] None or none apparent (4)
- [x] Recovered (3)
- [ ] Recovering (2)
- [ ] Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

(1)

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [ ] Poor to fair (2)
- [x] Poor (1)

4c. Habitat alteration. Score one or double check and average.

(3)

- [ ] None or none apparent (9)
- [ ] Recovered (6)
- [x] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [x] mowing
- [x] grazing
- [ ] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [ ] sedimentation
- [ ] dredging
- [x] farming
- [ ] nutrient enrichment

25 subtotal this page

last revised 1 February 2001 jjm

Site: Wetland 26	Rater(s): Rick Paul	Date: 6/23/2011

25
subtotal first page

Metric 5. Special Wetlands.

0 (max 10 pts.) | 25 (subtotal)

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Prairies (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 1 Qualitative Rating (-10)

Metric 6. Plant communities, interspersion, microtopography.

4 (max 20 pts.) | 29 (subtotal)

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

(1)
- [ ] Aquatic bed
- [1] Emergent
- [0] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.
Select only one.

(1)
- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [X] Low (1)
- [ ] None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

(1)
- [ ] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [X] Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

(1)
- [ ] Vegetated hummucks/tussucks
- [ ] Coarse woody debris >15cm (6in)
- [ ] Standing dead >25cm (10in) dbh
- [(1)] Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

29

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Wetland 28 - fringe e pond 8	Rater(s): Rick Paul	Date:

Metric 1. Wetland Area (size).

0 (max 6 pts.) | 0 (subtotal)

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [x] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

3 (max 14 pts.) | 3 (subtotal)

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

(0)

- [ ] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [ ] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [ ] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [x] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

3

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [ ] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [x] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [ ] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

24 (max 30 pts.) | 27 (subtotal)

3a. Sources of Water. Score all that apply.

(6)

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [x] Precipitation (1)
- [ ] Seasonal/Intermittent surface water (3)
- [x] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

(1)

- [ ] 100 year floodplain (1)
- [x] Between stream/lake and other human use (1)
- [ ] Part of wetland/upland (e.g. forest), complex (1)
- [ ] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only one and assign score.

(1)

- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [x] <0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

(4)

- [x] Semi- to permanently inundated/saturated (4)
- [ ] Regularly inundated/saturated (3)
- [ ] Seasonally inundated (2)
- [ ] Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

(12)

- [x] None or none apparent (12)
- [ ] Recovered (7)
- [ ] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [ ] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [ ] filling/grading
- [ ] road bed/RR track
- [ ] dredging
- [ ] other_____

Metric 4. Habitat Alteration and Development.

11 (max 20 pts.) | 38 (subtotal)

4a. Substrate disturbance. Score one or double check and average.

(3)

- [ ] None or none apparent (4)
- [x] Recovered (3)
- [ ] Recovering (2)
- [ ] Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

(2)

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [x] Poor to fair (2)
- [ ] Poor (1)

4c. Habitat alteration. Score one or double check and average.

(6)

- [ ] None or none apparent (9)
- [x] Recovered (6)
- [ ] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [x] mowing
- [ ] grazing
- [ ] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [ ] sedimentation
- [ ] dredging
- [ ] farming
- [ ] nutrient enrichment

38 (subtotal this page)

last revised 1 February 2001 jjm

Site: Wetland 28 - fringe Pond 8	Rater(s): Rick Paul	Date: 6/23/2011

38
subtotal first page

Metric 5. Special Wetlands.

0 (max 10 pts.) | 38 (subtotal)

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Prairies (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 1 Qualitative Rating (-10)

Metric 6. Plant communities, interspersion, microtopography.

-4 (max 20 pts.) | 34 (subtotal)

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

0

- [ ] Aquatic bed
- [0] Emergent
- [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.
Select only one.

0

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [ ] Low (1)
- [X] None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

-5

- [X] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [ ] Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

1

- [ ] Vegetated hummucks/tussucks
- [ ] Coarse woody debris >15cm (6in)
- [ ] Standing dead >25cm (10in) dbh
- [1] Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

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End of Quantitative Rating. Complete Categorization Worksheets.

ORAM v. 5.0 Field Form Quantitative Rating

Site: Wetland 29	Rater(s): Jason Earley	Date: 6/28/2011

Metric 1. Wetland Area (size).

0	0
max 6 pts.	subtotal

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [X] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

2	2
max 14 pts.	subtotal

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

(1)

- [ ] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [ ] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [ ] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [X] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

(1)

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [ ] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [ ] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [X] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

6.5	8.5
max 30 pts.	subtotal

3a. Sources of Water. Score all that apply.

(1)

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [X] Precipitation (1)
- [ ] Seasonal/Intermittent surface water (3)
- [ ] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

(2)

- [ ] 100 year floodplain (1)
- [X] Between stream/lake and other human use (1)
- [ ] Part of wetland/upland (e.g. forest), complex (1)
- [X] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only one and assign score.

(1)

- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [X] <0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

(1.5)

- [ ] Semi- to permanently inundated/saturated (4)
- [ ] Regularly inundated/saturated (3)
- [X] Seasonally inundated (2)
- [X] Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

(1)

- [ ] None or none apparent (12)
- [ ] Recovered (7)
- [ ] Recovering (3)
- [X] Recent or no recovery (1)

Check all disturbances observed

- [ ] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [ ] filling/grading
- [ ] road bed/RR track
- [ ] dredging
- [ ] other_____

Metric 4. Habitat Alteration and Development.

3	11.5
max 20 pts.	subtotal

4a. Substrate disturbance. Score one or double check and average.

(1)

- [ ] None or none apparent (4)
- [ ] Recovered (3)
- [ ] Recovering (2)
- [X] Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

(1)

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [ ] Poor to fair (2)
- [X] Poor (1)

4c. Habitat alteration. Score one or double check and average.

(1)

- [ ] None or none apparent (9)
- [ ] Recovered (6)
- [ ] Recovering (3)
- [X] Recent or no recovery (1)

Check all disturbances observed

- [X] mowing
- [X] grazing
- [ ] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [ ] sedimentation
- [ ] dredging
- [ ] farming
- [ ] nutrient enrichment

11.5
subtotal this page

last revised 1 February 2001 jjm

Site: Wetland 29	Rater(s): Jason Earley	Date: 6/28/2011

11.5
subtotal first page

Metric 5. Special Wetlands.

0 max 10 pts. | 11.5 subtotal

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Prairies (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 1 Qualitative Rating (-10)

Metric 6. Plant communities, interspersion, microtopography.

1 max 20 pts. | 12.5 subtotal

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

(0)

- [ ] Aquatic bed
- [0] Emergent
- [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.
Select only one.

(0)

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [ ] Low (1)
- [X] None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

(1)

- [ ] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [X] Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

(0)

- [ ] Vegetated hummucks/tussucks
- [ ] Coarse woody debris >15cm (6in)
- [ ] Standing dead >25cm (10in) dbh
- [ ] Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

12.5

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM v. 5.0 Field Form Quantitative Rating

Site: Wetland 30	Rater(s): Jason Earley	Date: 6/28/2011

Metric 1. Wetland Area (size).

0 (max 6 pts.) | 0 (subtotal)

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [X] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

2 (max 14 pts.) | 2 (subtotal)

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

(1)

- [ ] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [ ] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [X] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [ ] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

(1)

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [ ] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [ ] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [X] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

6.5 (max 30 pts.) | 8.5 (subtotal)

3a. Sources of Water. Score all that apply.

(1)

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [X] Precipitation (1)
- [ ] Seasonal/Intermittent surface water (3)
- [ ] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

(2)

- [ ] 100 year floodplain (1)
- [X] Between stream/lake and other human use (1)
- [X] Part of wetland/upland (e.g. forest), complex (1)
- [ ] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only one and assign score.

(1)

- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [X] <0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

(1.5)

- [ ] Semi- to permanently inundated/saturated (4)
- [ ] Regularly inundated/saturated (3)
- [X] Seasonally inundated (2)
- [X] Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

(1)

- [ ] None or none apparent (12)
- [ ] Recovered (7)
- [ ] Recovering (3)
- [X] Recent or no recovery (1)

Check all disturbances observed

- [ ] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [ ] filling/grading
- [ ] road bed/RR track
- [ ] dredging
- [ ] other_____

Metric 4. Habitat Alteration and Development.

3 (max 20 pts.) | 11.5 (subtotal)

4a. Substrate disturbance. Score one or double check and average.

(1)

- [ ] None or none apparent (4)
- [ ] Recovered (3)
- [ ] Recovering (2)
- [X] Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

(1)

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [ ] Poor to fair (2)
- [X] Poor (1)

4c. Habitat alteration. Score one or double check and average.

(1)

- [ ] None or none apparent (9)
- [ ] Recovered (6)
- [ ] Recovering (3)
- [X] Recent or no recovery (1)

Check all disturbances observed

- [ ] mowing
- [X] grazing
- [ ] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [X] sedimentation - pond Branch
- [ ] dredging
- [ ] farming
- [ ] nutrient enrichment

11.5 subtotal this page

last revised 1 February 2001 jjm

Site: Wetland 30	Rater(s): Jason Earley	Date: 6/28/2011

11.5
subtotal first page

Metric 5. Special Wetlands.

0 (max 10 pts.) | 11.5 (subtotal)

Check all that apply and score as indicated.

(0)

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Prairies (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 1 Qualitative Rating (-10)

Metric 6. Plant communities, interspersion, microtopography.

1 (max 20 pts.) | 12.5 (subtotal)

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

(0)

- [ ] Aquatic bed
- [0] Emergent
- [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.
Select only one.

(0)

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [ ] Low (1)
- [X] None (0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

(1)

- [ ] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [X] Absent (1)

6d. Microtopography.
Score all present using 0 to 3 scale.

(0)

- [ ] Vegetated hummucks/tussucks
- [ ] Coarse woody debris >15cm (6in)
- [ ] Standing dead >25cm (10in) dbh
- [ ] Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

12.5

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM v. 5.0 Field Form Quantitative Rating

Site: Wetland 31	Rater(s): Jason Earley	Date: 6/28/2011

Metric 1. Wetland Area (size).

0	0
max 6 pts.	subtotal

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [X] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

2	2
max 14 pts.	subtotal

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

(1)
- [ ] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [ ] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [X] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [ ] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

(1)
- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [ ] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [ ] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [X] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

5.5	7.5
max 30 pts.	subtotal

3a. Sources of Water. Score all that apply.

(1)
- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [X] Precipitation (1)
- [ ] Seasonal/Intermittent surface water (3)
- [ ] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

(1)
- [ ] 100 year floodplain (1)
- [ ] Between stream/lake and other human use (1)
- [ ] Part of wetland/upland (e.g. forest), complex (1)
- [X] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only one and assign score.

(1)
- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [X] <0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

(1.5)
- [ ] Semi- to permanently inundated/saturated (4)
- [ ] Regularly inundated/saturated (3)
- [X] Seasonally inundated (2)
- [X] Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

(1)
- [ ] None or none apparent (12)
- [ ] Recovered (7)
- [ ] Recovering (3)
- [X] Recent or no recovery (1)

Check all disturbances observed

- [ ] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [ ] filling/grading
- [ ] road bed/RR track
- [X] dredging
- [ ] other_____

Metric 4. Habitat Alteration and Development.

3	10.5
max 20 pts.	subtotal

4a. Substrate disturbance. Score one or double check and average.

(1)
- [ ] None or none apparent (4)
- [ ] Recovered (3)
- [ ] Recovering (2)
- [X] Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

(1)
- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [ ] Poor to fair (2)
- [X] Poor (1)

4c. Habitat alteration. Score one or double check and average.

(1)
- [ ] None or none apparent (9)
- [ ] Recovered (6)
- [ ] Recovering (3)
- [X] Recent or no recovery (1)

Check all disturbances observed

- [ ] mowing
- [X] grazing
- [ ] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [ ] sedimentation
- [ ] dredging
- [ ] farming
- [ ] nutrient enrichment

10.5
subtotal this page

last revised 1 February 2001 jjm

Site: Wetland 31	Rater(s): Jason Earley	Date: 6/28/2011

10.5
subtotal first page

Metric 5. Special Wetlands.

0 (max 10 pts.) | 10.5 (subtotal)

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Prairies (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 1 Qualitative Rating (-10)

Metric 6. Plant communities, interspersion, microtopography.

2 (max 20 pts.) | 12.5 (subtotal)

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [2] Emergent
- [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

(0)

6b. horizontal (plan view) Interspersion.
Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [ ] Low (1)
- [X] None (0)

(6)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- [ ] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [X] Absent (1)

(1)

6d. Microtopography.
Score all present using 0 to 3 scale.

- [ ] Vegetated hummucks/tussucks
- [ ] Coarse woody debris >15cm (6in)
- [ ] Standing dead >25cm (10in) dbh
- [/] Amphibian breeding pools

(1)

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

12.5

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Wetland 32	Rater(s): Rick Paul	Date: 7/21/2011

Metric 1. Wetland Area (size).

0 (max 6 pts.) | 0 (subtotal)

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [X] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

12 (max 14 pts.) | 12 (subtotal)

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

(7)

- [X] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [ ] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [ ] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [ ] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

(5)

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [X] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [ ] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [ ] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

21 (max 30 pts.) | 33 (subtotal)

3a. Sources of Water. Score all that apply.

(4)

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [X] Precipitation (1)
- [X] Seasonal/Intermittent surface water (3)
- [ ] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

(1)

- [ ] 100 year floodplain (1)
- [ ] Between stream/lake and other human use (1)
- [ ] Part of wetland/upland (e.g. forest), complex (1)
- [X] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only one and assign score.

(1)

- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [X] <0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

(3)

- [ ] Semi- to permanently inundated/saturated (4)
- [X] Regularly inundated/saturated (3)
- [ ] Seasonally inundated (2)
- [ ] Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

(12)

- [X] None or none apparent (12)
- [ ] Recovered (7)
- [ ] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [ ] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [ ] filling/grading
- [ ] road bed/RR track
- [ ] dredging
- [ ] other_____

Metric 4. Habitat Alteration and Development.

16 (max 20 pts.) | 49 (subtotal)

4a. Substrate disturbance. Score one or double check and average.

(4)

- [X] None or none apparent (4)
- [ ] Recovered (3)
- [ ] Recovering (2)
- [ ] Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

(3)

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [X] Fair (3)
- [ ] Poor to fair (2)
- [ ] Poor (1)

4c. Habitat alteration. Score one or double check and average.

(9)

- [X] None or none apparent (9)
- [ ] Recovered (6)
- [ ] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [ ] mowing
- [ ] grazing
- [ ] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [ ] sedimentation
- [ ] dredging
- [ ] farming
- [ ] nutrient enrichment

49 (subtotal this page)

last revised 1 February 2001 jjm

Site: Wetland 32	Rater(s): Kick Pal	Date: 7/21/2011

49
subtotal first page

Metric 5. Special Wetlands.

0 (max 10 pts.) | 49 (subtotal)

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Prairies (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 1 Qualitative Rating (-10)

Metric 6. Plant communities, interspersion, microtopography.

4 (max 20 pts.) | 53 (subtotal)

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [1] Emergent
- [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

(1)

6b. horizontal (plan view) Interspersion.
Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [X] Low (1)
- [ ] None (0)

(1)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- [ ] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [X] Absent (1)

(1)

6d. Microtopography.
Score all present using 0 to 3 scale.

- [8] Vegetated hummucks/tussucks
- [8] Coarse woody debris >15cm (6in)
- [0] Standing dead >25cm (10in) dbh
- [ ] Amphibian breeding pools

(1)

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

53

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM v. 5.0 Field Form Quantitative Rating

Site: Wetland 33 - Pond Fringe 5	Rater(s): J. Earley	Date: 9/9/2011

Metric 1. Wetland Area (size).

max 6 pts.	subtotal
0	0

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [X] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

max 14 pts.	subtotal
4	4

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- [ ] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [ ] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [X] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [ ] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

(1)

2b. Intensity of surrounding land use. Select one or double check and average.

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [ ] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [X] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [ ] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

(3)

Metric 3. Hydrology.

max 30 pts.	subtotal
14.5	18.5

3a. Sources of Water. Score all that apply.

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [X] Precipitation (1)
- [X] Seasonal/Intermittent surface water (3)
- [X] Perennial surface water (lake or stream) (5)

(9)

3b. Connectivity. Score all that apply.

- [ ] 100 year floodplain (1)
- [ ] Between stream/lake and other human use (1)
- [ ] Part of wetland/upland (e.g. forest), complex (1)
- [X] Part of riparian or upland corridor (1)

(1)

3c. Maximum water depth. Select only one and assign score.

- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [X] <0.4m (<15.7in) (1)

(1)

3d. Duration inundation/saturation. Score one or dbl check.

- [ ] Semi- to permanently inundated/saturated (4)
- [X] Regularly inundated/saturated (3)
- [X] Seasonally inundated (2)
- [ ] Seasonally saturated in upper 30cm (12in) (1)

(2.5)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- [ ] None or none apparent (12)
- [ ] Recovered (7)
- [ ] Recovering (3)
- [X] Recent or no recovery (1)

(1)

Check all disturbances observed

- [ ] ditch
- [ ] tile
- [X] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [ ] filling/grading
- [ ] road bed/RR track
- [X] dredging
- [ ] other_____

Metric 4. Habitat Alteration and Development.

max 20 pts.	subtotal
4.5	23

4a. Substrate disturbance. Score one or double check and average.

- [ ] None or none apparent (4)
- [ ] Recovered (3)
- [X] Recovering (2)
- [X] Recent or no recovery (1)

(1.5)

4b. Habitat development. Select only one and assign score.

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [ ] Poor to fair (2)
- [X] Poor (1)

(1)

4c. Habitat alteration. Score one or double check and average.

- [ ] None or none apparent (9)
- [ ] Recovered (6)
- [X] Recovering (3)
- [X] Recent or no recovery (1)

(2)

Check all disturbances observed

- [ ] mowing
- [ ] grazing
- [ ] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [X] sedimentation
- [ ] dredging
- [ ] farming
- [ ] nutrient enrichment

23

subtotal this page

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Site: Wetland 33 - Pond 5 Fairgo	Rater(s): J. EARley	Date: 9/9/2011

23
subtotal first page

Metric 5. Special Wetlands.

0 (max 10 pts.) | 23 (subtotal)

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Prairies (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 1 Qualitative Rating (-10)

Metric 6. Plant communities, interspersion, microtopography.

3 (max 20 pts.) | 26 (subtotal)

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [1] Emergent
- [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

(1)

6b. horizontal (plan view) Interspersion.
Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [ ] Low (1)
- [X] None (0)

(0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- [ ] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [X] Absent (1)

(1)

6d. Microtopography.
Score all present using 0 to 3 scale.

- [ ] Vegetated hummucks/tussucks
- [ ] Coarse woody debris >15cm (6in)
- [ ] Standing dead >25cm (10in) dbh
- [1] Amphibian breeding pools

(1)

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

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End of Quantitative Rating. Complete Categorization Worksheets.

ORAM v. 5.0 Field Form Quantitative Rating

Site: Wetland 34	Rater(s): Jason Emley	Date: 9/13/2011

Metric 1. Wetland Area (size).

max 6 pts.	subtotal
0	0

Select one size class and assign score.

(0)
- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [X] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

max 14 pts.	subtotal
3	3

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

(1)
- [ ] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [ ] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [X] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [ ] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

(2)
- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [ ] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [X] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [X] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

max 30 pts.	subtotal
5.5	8.5

3a. Sources of Water. Score all that apply.

(1)
- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [X] Precipitation (1)
- [ ] Seasonal/Intermittent surface water (3)
- [ ] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

(1)
- [ ] 100 year floodplain (1)
- [ ] Between stream/lake and other human use (1)
- [X] Part of wetland/upland (e.g. forest), complex (1)
- [ ] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only one and assign score.

(1)
- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [X] <0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

(1.5)
- [ ] Semi- to permanently inundated/saturated (4)
- [ ] Regularly inundated/saturated (3)
- [X] Seasonally inundated (2)
- [X] Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

(1)
- [ ] None or none apparent (12)
- [ ] Recovered (7)
- [ ] Recovering (3)
- [X] Recent or no recovery (1)

Check all disturbances observed
- [ ] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [X] filling/grading
- [X] road bed/RR track — Active Logging in Adjacent Area
- [ ] dredging
- [ ] other_____

Metric 4. Habitat Alteration and Development.

max 20 pts.	subtotal
3.5	12

4a. Substrate disturbance. Score one or double check and average.

(1.5)
- [ ] None or none apparent (4)
- [ ] Recovered (3)
- [X] Recovering (2)
- [X] Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

(1)
- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [ ] Poor to fair (2)
- [X] Poor (1)

4c. Habitat alteration. Score one or double check and average.

(1)
- [ ] None or none apparent (9)
- [ ] Recovered (6)
- [ ] Recovering (3)
- [X] Recent or no recovery (1)

Check all disturbances observed
- [X] mowing
- [ ] grazing
- [X] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [X] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [ ] sedimentation — Active logging Adjacent to Site
- [ ] dredging
- [ ] farming
- [ ] nutrient enrichment

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ORAM v. 5.0 Field Form Quantitative Rating

Site: Wetland 34	Rater(s): J. Earley	Date: 9/13/2011

12
subtotal first page

Metric 5. Special Wetlands.

0	12
max 10 pts.	subtotal

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Prairies (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 1 Qualitative Rating (-10)

Metric 6. Plant communities, interspersion, microtopography.

2	14
max 20 pts.	subtotal

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [1] Emergent
- [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

(0)

6b. horizontal (plan view) Interspersion.
Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [ ] Low (1)
- [X] None (0)

(0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- [ ] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [X] Absent (1)

(1)

6d. Microtopography.
Score all present using 0 to 3 scale.

- [0] Vegetated hummucks/tussucks
- [ ] Coarse woody debris >15cm (6in)
- [ ] Standing dead >25cm (10in) dbh
- [ ] Amphibian breeding pools

(0)

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

13

End of Quantitative Rating. Complete Categorization Worksheets.

Site: Wetland 35	Rater(s): Jason Earley	Date: 9/13/2011

Metric 1. Wetland Area (size).

0 (max 6 pts.) | 0 (subtotal)

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [x] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

8 (max 14 pts.) | 8 (subtotal)

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

(4)

- [ ] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [x] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [ ] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [ ] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

(4)

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [x] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [x] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [ ] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

17 (max 30 pts.) | 25 (subtotal)

3a. Sources of Water. Score all that apply.

(4)

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [x] Precipitation (1)
- [x] Seasonal/Intermittent surface water (3)
- [ ] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

(1)

- [ ] 100 year floodplain (1)
- [ ] Between stream/lake and other human use (1)
- [x] Part of wetland/upland (e.g. forest), complex (1)
- [ ] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only one and assign score.

(1)

- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [x] <0.4m (<15.7in) (1)

3d. Duration inundation/saturation. Score one or dbl check.

(1.5)

- [ ] Semi- to permanently inundated/saturated (4)
- [ ] Regularly inundated/saturated (3)
- [x] Seasonally inundated (2)
- [x] Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

(9.5)

- [x] None or none apparent (12)
- [x] Recovered (7)
- [ ] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [x] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [x] filling/grading
- [x] road bed/RR track
- [ ] dredging
- [ ] other_____

Metric 4. Habitat Alteration and Development.

10 (max 20 pts.) | 35 (subtotal)

4a. Substrate disturbance. Score one or double check and average.

(3)

- [ ] None or none apparent (4)
- [x] Recovered (3)
- [ ] Recovering (2)
- [ ] Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

(1)

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [ ] Poor to fair (2)
- [x] Poor (1)

4c. Habitat alteration. Score one or double check and average.

(6)

- [ ] None or none apparent (9)
- [x] Recovered (6)
- [ ] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [ ] mowing
- [ ] grazing
- [x] clearcutting
- [x] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [ ] sedimentation
- [ ] dredging
- [ ] farming
- [ ] nutrient enrichment

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Site: Wetland 35	Rater(s): Jason Earley	Date: 9/13/2011

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subtotal first page

Metric 5. Special Wetlands.

0 (max 10 pts.) | 35 (subtotal)

Check all that apply and score as indicated.

- [ ] Bog (10)
- [ ] Fen (10)
- [ ] Old growth forest (10)
- [ ] Mature forested wetland (5)
- [ ] Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- [ ] Lake Erie coastal/tributary wetland-restricted hydrology (5)
- [ ] Lake Plain Sand Prairies (Oak Openings) (10)
- [ ] Relict Wet Prairies (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 1 Qualitative Rating (-10)

Metric 6. Plant communities, interspersion, microtopography.

2 (max 20 pts.) | 37 (subtotal)

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [1] Emergent
- [0] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

(1)

6b. horizontal (plan view) Interspersion.
Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [ ] Low (1)
- [X] None (0)

(0)

6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- [ ] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [X] Absent (1)

(1)

6d. Microtopography.
Score all present using 0 to 3 scale.

- [0] Vegetated hummucks/tussucks
- [ ] Coarse woody debris >15cm (6in)
- [ ] Standing dead >25cm (10in) dbh
- [ ] Amphibian breeding pools

(0)

Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

37

End of Quantitative Rating. Complete Categorization Worksheets.

Wetland Determination Data Forms
Eastern Mountains and Piedmont

(forms are grouped by wetland and not in sequential order)

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 1

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA: LRR N Lat: 38.8628 Long: 82.8954 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 1**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
X Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	**X**	No	Depth (inches):	10

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **1**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Sambucus canadensis*	10	Yes	FACW
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Carex vulpinoidea*	30	Yes	OBL
2. *Carex lurida*	30	Yes	OBL
3. *Agrostis gigantea*	30	Yes	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	90	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

All of the dominant species observed have an OBL and FACW wetland indicator status. This observation satisfies the Rapid Test for Hydrophytic Vegetation. This observation satisfies the vegetation criterion.

SOIL Sampling Point: **1**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/2	95	10YR 4/4	5	C	PL	SiL	
6-18	10YR 5/2	95	10YR 4/6	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 2

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8629 Long: 82.8954 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland? Yes No X**
Wetland Hydrology Present?	Yes	No	**X**	**Out Point for Wetland 1**

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **2**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.		Yes	UPL
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	30	Yes	FACU
2. *Agrostis gigantea*	30	Yes	FACW
3. *Galium aparine*	30	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	90	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/3	100					SiL	Disturbed
>6	IMPENETRABLE						Fill	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):Yes

Type: Fill

Depth (inches): 6

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicators presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 59

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA: LRR N Lat: 38.8631 Long: 82.8947 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 1**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water(A1)
- High Water Table (A2)
- **X** Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Water Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Sparsely Vegetated Concave Surface (B8)
- **X** Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- **X** FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes		No	**X**	Depth (inches):
Water Table Present?	Yes		No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	**X**	No		Depth (inches): 8

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **59**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Phalaris arundinacea*	60	Yes	FACW
2. *Polygonum persicaria*	20	Yes	FACW
3. *Agrostis gigantea*	10	No	FACW
4. *Ambrosia artemisiifolia*	10	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

All of the dominant species observed have a FACW wetland indicator status. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/2	95	10YR 4/6	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 60

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8631 Long: 82.8948 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland? Yes No X**
Wetland Hydrology Present?	Yes	No	**X**	**Out Point for Wetland 1**

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **60**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.		Yes	UPL
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Festuca elatior*	60	Yes	FACU
2. *Elytrigia repens*	25	Yes	FACU
3. *Phalaris arundinacea*	5	No	FACW
4. *Dactylis glomerata*	5	No	FACU
5. *Melilotus officinalis*	5	No	FACU
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	IMPENETRABLE FILL							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):Yes

Type: Fill

Depth (inches): 1

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicators presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 3

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA: LRR N Lat: 38.8625 Long: 82.8957 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 2/3**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
X Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	**X**	No		Depth (inches):	1
Water Table Present?	Yes		No	**X**	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	**X**	No		Depth (inches):	2

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **3**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Juncus effusus*	60	Yes	FACW
2. *Carex lurida*	20	Yes	OBL
3. *Agrostis gigantea*	20	Yes	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

All of the dominant species observed have an OBL and FACW wetland indicator status. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

SOIL Sampling Point: **3**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/2	95	10YR 4/6	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 4

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8627 Long: 82.8957 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No		**Within a Wetland?** **Yes** **No** **X**
Wetland Hydrology Present?	Yes		No	**X**	**Out Point for Wetland 2/3**

Remarks:

This area satisfies only one of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? **Yes** **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **4**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.		Yes	UPL
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	100	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/2	95	10YR 4/6	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 5

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA: LRR N Lat: 38.8623 Long: 82.8966 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 2/3**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
X Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	**X**	No		Depth (inches):	1
Water Table Present?	Yes		No	**X**	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	**X**	No		Depth (inches):	1

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **5**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Leersia oryzoides*	40	Yes	OBL
2. *Carex lurida*	40	Yes	OBL
3. *Juncus effusus*	20	Yes	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

All of the dominant species observed have an OBL and FACW wetland indicator status. This observation satisfies the Rapid Test for Hydrophytic Vegetation. This observation satisfies the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	2.5Y 5/1	95	10YR 4/4	5	C	PL	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 6

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8622 Long: 82.8966 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland? Yes No X**
Wetland Hydrology Present?	Yes	No	**X**	**Out Point for Wetland 2/3**

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **6**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.		Yes	UPL
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	40	Yes	FACU
2. *Andropogon virginicus*	20	Yes	FACU
3. *Juncus effusus*	15	No	FACW
4. *Anthoxanthum odoratum*	15	No	FACU
5. *Chrysanthemum leucanthemum*	10	No	UPL
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 5/4						SiL	
8-18	10YR 5/3	95	10YR 5/6	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicators presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 7

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Drainage Swale Local relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA: LRR N Lat: 38.8623 Long: 82.8968 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: PUBGH

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland W8WL6**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water(A1)
- High Water Table (A2)
- **X** Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- **X** Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Water Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Sparsely Vegetated Concave Surface (B8)
- **X** Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- **X** FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes		No	**X**	Depth (inches):
Water Table Present?	Yes		No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	**X**	No		Depth (inches): 8

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **7**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Fraxinus pennsylvanica*	15	Yes	FACW
2. *Rubus allegheniensis*	5	Yes	FACU
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Juncus effusus*	60	Yes	FACW
2. *Solidago gigantea*	30	Yes	FACW
3. *Solidago canadensis*	10	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is > fifty percent

3 - Prevalence Index is ≤3.0[1]

4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominance test is greater than fifty percent. This observation satisfies the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	2.5Y 5/1	95	10YR 4/4	5	C	PL	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 8

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8622 Long: 82.8968 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland? Yes No X**
Wetland Hydrology Present?	Yes	No	**X**	**Out Point for Wetland W8WL6**

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **8**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Rubus allegheniensis*	20	Yes	FACU
2. *Rosa multiflora*	15	Yes	FACU
3.			
4.			
5.			
	35	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	70	Yes	FACU
2. *Chrysanthemum leucanthemum*	10	No	UPL
3. *Poa pratensis*	10	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	90	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 5/4						SiL	
8-18	10YR 5/3	95	10YR 5/6	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicators presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 9

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Drainage Swale Local relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA: LRR N Lat: 38.8625 Long: 82.8966 Datum: NAD 27

Soil Map Unit Name: Ha – Haymond silt loam, occasionally flooded and MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 4**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water(A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- **X** Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Water Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- **X** Surface Soil Cracks (B6)
- Sparsely Vegetated Concave Surface (B8)
- **X** Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- **X** FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **9**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Carex vulpinoidea*	30	Yes	OBL
2. *Polygonum persicaria*	30	Yes	FACW
3. *Xanthium strumarium*	30	Yes	FAC
4. *Carex lurida*	10	No	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is > fifty percent

3 - Prevalence Index is ≤3.0[1]

4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominance test is greater than fifty percent. This observation satisfies the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	2.5Y 5/1	95	10YR 4/4	5	C	PL	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 10

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 5

Subregion (LRR or MLRA: LRR N Lat: 38.8625 Long: 82.8967 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland? Yes No X**
Wetland Hydrology Present?	Yes	No	**X**	**Out Point for Wetland 4**

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **10**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	90	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	90	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 5/4						SiL	
8-18	10YR 5/3	95	10YR 5/6	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicators presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 11

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Braided Stream Channel Local relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA: LRR N Lat: 38.8627 Long: 82.8972 Datum: NAD 27

Soil Map Unit Name: Ha – Haymond silt loam, occasionally flooded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 5/W8WL7**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
X Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
X Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	**X**	No		Depth (inches):	3
Water Table Present?	Yes		No	**X**	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	**X**	No		Depth (inches):	1

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **11**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	5	Yes	FAC
2. *Salix fragilis*	5	Yes	FAC
3.			
4.			
5.			
	10	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Sambucus canadensis*	5	Yes	FACW
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Phalaris arundinacea*	80	Yes	FACW
2. *Impatiens capensis*	20	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is > fifty percent

3 - Prevalence Index is ≤3.0[1]

4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominance test is greater than fifty percent. This observation satisfies the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/2	95	10YR 3/4	5	C	PL	SiL	
>12	IMPENETRABLE						Gravel	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):Yes

Type: Gravel

Depth (inches): 12

Hydric Soil Present? Yes X No

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 12

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Stream Embankment Local relief (concave, convex, none): Convex Slope (%): 15

Subregion (LRR or MLRA: LRR N Lat: 38.8627 Long: 82.8971 Datum: NAD 27

Soil Map Unit Name: Ha – Haymond silt loam, occasionally flooded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland? Yes No X**
Wetland Hydrology Present?	Yes	No	**X**	**Out Point for Wetland 5/W8WL7**

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **12**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	60	Yes	FACU
2. *Poa pratensis*	20	Yes	FACU
3. *Chrysanthemum leucanthemum*	10	No	UPL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	90	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 5/4						SiL	
>8	IMPENETRABLE							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):Yes

Type: Unknown

Depth (inches): 8

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicators presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 13

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Depression/Drainage Swale Local relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA: LRR N Lat: 38.8627 Long: 82.8960 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 6**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	**X** Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **13**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	30	Yes	FACU
2. *Polygonum persicaria*	20	Yes	FACW
3. *Juncus effusus*	20	Yes	FACW
4. *Agrostis gigantea*	20	Yes	FACW
5. *Ambrosia artemisiifolia*	5	No	FACU
6. *Aster prenanthoides*	5	No	FAC
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is > fifty percent

3 - Prevalence Index is ≤3.0[1]

4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominance test is greater than fifty percent. This observation satisfies the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	2.5Y 5/1	95	10YR 4/4	5	C	PL	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 14

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8627 Long: 82.8961 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland? Yes No X**
Wetland Hydrology Present?	Yes	No	**X**	**Out Point for Wetland 6**

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **14**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.		Yes	UPL
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	80	Yes	FACU
2. *Asclepias syriaca*	20	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 5/4						SiL	
8-18	10YR 5/3	95	10YR 5/6	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicators presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 15

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Drained Pond/Depression Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA: LRR N Lat: 38.8618 Long: 82.8944 Datum: NAD 27

Soil Map Unit Name: ErD – Ernest silt loam, 15 to 25 percent slopes NWI Classification: PUBGH

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 7**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water(A1)
- High Water Table (A2)
- **X** Saturation (A3)
- Water Marks (B1)
- **X** Sediment Deposits (B2)
- Drift Deposits (B3)
- **X** Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Water Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- **X** Surface Soil Cracks (B6)
- Sparsely Vegetated Concave Surface (B8)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- **X** FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes		No	**X**	Depth (inches):
Water Table Present?	Yes		No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	**X**	No		Depth (inches): 3

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **15**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Eleocharis obtusa*	25	Yes	OBL
2. *Echinochloa crusgalli*	5	No	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	30	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominant species observed has an OBL wetland indicator status. This observation satisfies the Rapid Test for Hydrophytic Vegetation. This observation satisfies the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	5/10Y GLEY (5/1)	100					SiC	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 16

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Fill Pile Local relief (concave, convex, none): Convex Slope (%): 15

Subregion (LRR or MLRA: LRR N Lat: 38.8619 Long: 82.8943 Datum: NAD 27

Soil Map Unit Name: ErD – Ernest silt loam, 15 to 25 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland? Yes No X**
Wetland Hydrology Present?	Yes	No	**X**	**Out Point for Wetland 7**

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **16**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.		Yes	UPL
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Melilotus alba*	30	Yes	FACU
2. *Ambrosia artemisiifolia*	10	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	40	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 5/4						Fill Material	
>1	IMPENETRABLE							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Yes

Type: Fill Material

Depth (inches): 1

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicators presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 17

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Depression/Drainage Swale Local relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA: LRR N Lat: 38.8620 Long: 82.8947 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 8**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	**X** Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **17**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Juncus effusus*	40	Yes	FACW
2. *Scirpus hattorianus*	40	Yes	OBL
3. *Juncus dudleyi*	20	Yes	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

All of the dominant species observed have a wetland indicator status of OBL and FACW. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	2.5Y 5/2	95	10YR 4/4	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 18

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8620 Long: 82.8946 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland? Yes No X**
Wetland Hydrology Present?	Yes	No	**X**	**Out Point for Wetland 8**

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **18**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Rosa multiflora*	5	Yes	FACU
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	40	Yes	FACU
2. *Anthoxanthum odoratum*	30	Yes	FACU
3. *Allium vineale*	10	No	FACU
4. *Juncus dudleyi*	10	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11			
	90	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 5/2						SiL	
>8	IMPENETRABLE						Rock	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Yes

Type: Rock

Depth (inches): 8

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicators presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 19

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Depression/Drainage Swale Local relief (concave, convex, none): Concave Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8609 Long: 82.8945 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No		**Is the Sampled Area**
Hydric Soils Present?	Yes		No	**X**	**Within a Wetland?** **Yes** **No** **X**
Wetland Hydrology Present?	Yes		No	**X**	**General Out Point**

Remarks:

This area satisfies only one of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? **Yes** **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **19**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Scirpus hattorianus*	20	Yes	OBL
2. *Juncus effusus*	10	Yes	FACW
3. *Juncus dudleyi*	10	Yes	FACW
4. *Alopecurus pratensis*	5	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11			
	45	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

All of the dominant species observed have a wetland indicator status of OBL and FACW. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 5/2						SiL	
>2	IMPENETRABLE						Rock	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Yes

Type: Rock

Depth (inches): 2

Hydric Soil Present? Yes X No

Remarks:

The soils in this area do not correspond to any of the hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 20

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8616 Long: 82.8967 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland? Yes No X**
Wetland Hydrology Present?	Yes	No	**X**	**General Out Point**

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **20**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	40	Yes	FACU
2. *Juncus effusus*	40	Yes	FACW
3. *Carex vulpinoidea*	10	No	OBL
4. *Agrostis gigantea*	10	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/3	95	10YR 4/6	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Yes

Type: Rock

Depth (inches): 8

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicators presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 21

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Depression/Stream Terrace Local relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA: LRR N Lat: 38.8614 Long: 82.8969 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland W8WL8**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
X Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	**X**	No		Depth (inches):	2
Water Table Present?	Yes		No	**X**	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	**X**	No		Depth (inches):	1

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **21**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Juncus effusus*	30	Yes	FACW
2. *Carex lurida*	30	Yes	OBL
3. *Scirpus hattorianus*	15	Yes	OBL
4. *Glyceria striata*	15	Yes	OBL
5. *Eleocharis obtusa*	10	No	OBL
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

All of the dominant species observed have a wetland indicator status of OBL or FACW. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	2.5Y 5/2	95	10YR 4/6	5	C	PL	SiL	
>12	IMPENETRABLE							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Yes

Type: Rock

Depth (inches): 12

Hydric Soil Present? Yes X No

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 22

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8615 Long: 82.8969 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No		**Within a Wetland? Yes** **No X**
Wetland Hydrology Present?	Yes		No	**X**	**Out Point for Wetland W8WL8**

Remarks:

This area satisfies only one of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **22**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Prunus serotina*	5	Yes	FACU
2.			
3.			
4.			
5.			
	5	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Rosa multiflora*	5	Yes	FACU
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	40	Yes	FACU
2. *Festuca elatior*	40	Yes	FACU
3. *Daucus carota*	20	Yes	UPL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/2	95	10YR 4/6	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 23

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Depression/Drainage Swale Local relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA: LRR N Lat: 38.8602 Long: 82.8950 Datum: NAD 27

Soil Map Unit Name: ErD – Ernest silt loam, 15 to 25 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 9**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
X Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	**X**	No		Depth (inches):	2
Water Table Present?	Yes		No	**X**	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes		No	**X**	Depth (inches):	

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **23**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Juncus effusus*	80	Yes	FACW
2. *Carex lurida*	10	No	OBL
3. *Scirpus hattorianus*	10	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:	
OBL Species	× 1 =	
FACW Species	× 2 =	
FAC Species	× 3 =	
FACU Species	× 4 =	
UPL Species	× 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominant species observed has a wetland indicator status of FACW. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	2.5Y 5/2	95	10YR 4/6	5	C	PL	SiL	
>12	IMPENETRABLE						Rock	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Yes

Type: Rock

Depth (inches): 12

Hydric Soil Present? Yes X No

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 24

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 15

Subregion (LRR or MLRA: LRR N Lat: 38.8602 Long: 82.8951 Datum: NAD 27

Soil Map Unit Name: ErD – Ernest silt loam, 15 to 25 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland? Yes No X**
Wetland Hydrology Present?	Yes	No	**X**	**Out Point for Wetland 9**

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **24**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Rubus pensylvanicus*	20	Yes	FACU
2.			
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	10	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	10	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1. *Lonicera japonica*	80	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	80	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 5/4						SiL	
>4	IMPENETRABLE						Rock	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Yes

Type: Rock

Depth (inches): 4

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicators presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 26

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 15

Subregion (LRR or MLRA: LRR N Lat: 38.8602 Long: 82.8951 Datum: NAD 27

Soil Map Unit Name: ErD – Ernest silt loam, 15 to 25 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No		**Within a Wetland? Yes** **No X**
Wetland Hydrology Present?	Yes		No	**X**	**General Out Point**

Remarks:

This area satisfies only one of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	80	Yes	FACU
2. *Agrostis gigantea*	10	No	FACW
3. *Asclepias syriaca*	10	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	80	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/2	95	10YR 4/6	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 27

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Old-Logging Road Tire Ruts Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA: LRR N Lat: 38.8589 Long: 82.8904 Datum: NAD 27

Soil Map Unit Name: TcB – Tilsit-Coolville association, undulating NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No		**Is the Sampled Area**
Hydric Soils Present?	Yes		No	**X**	**Within a Wetland?** **Yes** **No** **X**
Wetland Hydrology Present?	Yes	**X**	No		**General Out Point**

Remarks:

This area satisfies only two of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
X Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	**X**	No		Depth (inches):	0.5
Water Table Present?	Yes		No	**X**	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes		No	**X**	Depth (inches):	

Wetland Hydrology Present? **Yes** **X** **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **27**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Leersia oryzoides*	10	Yes	OBL
2. *Sagittaria latifolia*	5	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	15	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominant species observed have a wetland indicator status of OBL. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 4/2 AND 4/6	100					SiCL	Disturbed
2-6	10YR 5/4	100					SiCL	
>6	IMPENETRABLE						Rock	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Yes

Type: Rock

Depth (inches): 6

Hydric Soil Present? **Yes** **No** **X**

Remarks:

This sampling point was taken on an old-logging road. The soils in this area do not correspond to any of the hydric soil indicators presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 28

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 20

Subregion (LRR or MLRA: LRR N Lat: 38.8616 Long: 82.8938 Datum: NAD 27

Soil Map Unit Name: ErD – Ernest silt loam, 15 to 25 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No		**Is the Sampled Area**
Hydric Soils Present?	Yes		No	**X**	**Within a Wetland?** **Yes** **No** **X**
Wetland Hydrology Present?	Yes		No	**X**	**General Out Point**

Remarks:

This area satisfies only one of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? **Yes** **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Sufficient Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **28**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Carex vulpinoidea*	40	Yes	OBL
2. *Juncus dudleyi*	40	Yes	FACW
3. *Scirpus hattorianus*	10	No	OBL
4. *Eleocharis obtusa*	5	No	OBL
5. *Ambrosia artemisiifolia*	5	No	FACU
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominant species observed have a wetland indicator status of OBL and FACW. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 5/3	95	10YR 4/6	5	C	PL	SiL	
>2	IMPENETRABLE							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Yes

Type: Rock

Depth (inches): 2

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicators presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 30

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Access Road Local relief (concave, convex, none): Convex Slope (%): 20

Subregion (LRR or MLRA: LRR N Lat: 38.8619 Long: 82.8940 Datum: NAD 27

Soil Map Unit Name: ErD – Ernest silt loam, 15 to 25 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland? Yes No X**
Wetland Hydrology Present?	Yes	No	**X**	**General Out Point**

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants.

		Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)				
1.				
2.				
3.				
4.				
5.				
			= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)				
1.				
2.				
3.				
4.				
5.				
			= Total Cover	
Herb Stratum (Plot size: 5 ft)				
1.	*Festuca elatior*	40	Yes	FACU
2.	*Agrostis gigantea*	30	Yes	FACW
3.	*Plantago lanceolata*	10	No	UPL
4.	*Ambrosia artemisiifolia*	10	No	FACU
5.				
6.				
7.				
8.				
9.				
10.				
11				
		90	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
			= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	IMPENETRABLE						Rock	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Yes

Type: Rock

Depth (inches): 1

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicators presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 31

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Terrace Local relief (concave, convex, none): Level Slope (%): 2

Subregion (LRR or MLRA: LRR N Lat: 38.8620 Long: 82.8939 Datum: NAD 27

Soil Map Unit Name: ErD – Ernest silt loam, 15 to 25 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 12**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	**X**	No	Depth (inches):	1

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **31**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Juncus effusus*	100	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominant species observed has a wetland indicator status of FACW. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/2	95	10YR 5/6	5	C	PL	SiL	
>12	IMPENETRABLE						Rock	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Yes

Type: Rock

Depth (inches): 12

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 32

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Access Road Local relief (concave, convex, none): Convex Slope (%): 20

Subregion (LRR or MLRA: LRR N Lat: 38.8618 Long: 82.8938 Datum: NAD 27

Soil Map Unit Name: ErD – Ernest silt loam, 15 to 25 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland? Yes No X**
Wetland Hydrology Present?	Yes	No	**X**	**Out Point for Wetland 12**

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **32**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Rubus allegheniensis*	15	Yes	FACU
2.			
3.			
4.			
5.			
	15	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	80	Yes	FACU
2. *Chrysanthemum leucanthemum*	10	No	UPL
3. *Achillea millefolium*	10	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 5/3	100					SiL	
>3	IMPENETRABLE						Rock	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Yes

Type: Rock

Depth (inches): 3

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicators presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 33

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8624 Long: 82.8933 Datum: NAD 27

Soil Map Unit Name: ErD – Ernest silt loam, 15 to 25 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 12**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
Surface Water(A1)	True Aquatic Plants (B14)		Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)		Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X**	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)		Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)		Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)		Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)		Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)			Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)			Geomorphic Position (D2)
Water Stained Leaves (B9)			Shallow Aquitard (D3)
Aquatic Fauna (B13)			Microtopographic Relief (D4)
		X	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **33**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Juncus effusus*	40	Yes	FACW
2. *Bidens polylepis*	40	Yes	FACW
3. *Juncus anthelatus*	10	No	FAC
4. *Eupatorium perfoliatum*	5	No	FACW
5. *Eupatorium serotinum*	5	No	FAC
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominant species observed have a wetland indicator status of FACW. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/2	95	10YR 4/6	5	C	PL	SiL	
>12	IMPENETRABLE						Rock	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Yes

Type: Rock

Depth (inches): 12

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 34

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 20

Subregion (LRR or MLRA: LRR N Lat: 38.8624 Long: 82.8933 Datum: NAD 27

Soil Map Unit Name: ErD – Ernest silt loam, 15 to 25 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland? Yes No X**
Wetland Hydrology Present?	Yes	No	**X**	**Out Point for Wetland 12**

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **34**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Rubus allegheniensis*	15	Yes	FACU
2.			
3.			
4.			
5.			
	15	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	70	Yes	FACU
2. *Eupatorium fistulosum*	10	No	FACW
3. *Erigeron strigosus*	10	No	FACU
4. *Anthoxanthum odoratum*	10	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 5/3	100					SiL	
>5	IMPENETRABLE						Rock	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Yes

Type: Rock

Depth (inches): 5

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicators presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 35

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Swale Local relief (concave, convex, none): Convex Slope (%): 15

Subregion (LRR or MLRA: LRR N Lat: 38.8629 Long: 82.8935 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 12**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	**X**	No	Depth (inches):	1

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **35**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Rubus allegheniensis*	10	Yes	FACU
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Juncus effusus*	50	Yes	FACW
2. *Juncus anthelatus*	20	Yes	FAC
3. *Eupatorium fistulosum*	15	No	FACW
4. *Apocynum cannabinum*	15	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is > fifty percent

3 - Prevalence Index is ≤3.0[1]

4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is greater than fifty percent. This observation satisfies the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/2	95	10YR 5/6	5	C	PL	SiL	
12-18	10YR 6/3	95	10YR 5/8	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 36

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 15

Subregion (LRR or MLRA: LRR N Lat: 38.8628 Long: 82.8936 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No		**Within a Wetland?** **Yes** **No** **X**
Wetland Hydrology Present?	Yes		No	**X**	**Out Point for Wetland 12**

Remarks:

This area satisfies only one of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? **Yes** **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **36**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Rubus allegheniensis*	10	Yes	FACU
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	90	Yes	FACU
2. *Anthoxanthum odoratum*	10	No	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/2	95	10YR 5/6	5	C	PL	SiL	
12-18	10YR 6/3	95	10YR 5/8	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 37

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR or MLRA: LRR N Lat: 38.8633 Long: 82.8932 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 12**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water(A1)
- High Water Table (A2)
- **X** Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- **X** Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Water Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Sparsely Vegetated Concave Surface (B8)
- **X** Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- **X** FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes		No	**X**	Depth (inches):
Water Table Present?	Yes		No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	**X**	No		Depth (inches): 1

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **37**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Rubus allegheniensis*	5	Yes	FACU
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Carex vulpinoidea*	40	Yes	OBL
2. *Juncus effusus*	30	Yes	FACW
3. *Epilobium coloratum*	20	Yes	OBL
4. *Ludwigia alternifolia*	2.5	No	FACW
5. *Apocynum cannabinum*	2.5	No	FACU
6. *Agrimonia parviflora*	2.5	No	FAC
7.			
8.			
9.			
10.			
11			
	97.5	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is > fifty percent

3 - Prevalence Index is ≤3.0[1]

4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is greater than fifty percent. This observation satisfies the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/2	95	10YR 5/6	5	C	PL	SiL	
12-18	10YR 6/3	95	10YR 5/8	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 38

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 15

Subregion (LRR or MLRA: LRR N Lat: 38.8628 Long: 82.8936 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No		**Within a Wetland?** **Yes** **No** **X**
Wetland Hydrology Present?	Yes		No	**X**	**Out Point for Wetland 12**

Remarks:

This area satisfies only one of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? **Yes** **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **38**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Rubus allegheniensis*	5	Yes	FACU
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	40	Yes	FACU
2. *Anthoxanthum odoratum*	10	No	FACU
3. *Juncus anthelatus*	10	No	FAC
4. *Eupatorium fistulosum*	5	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11			
	65	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1. *Lonicera japonica*	30	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	30	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/2	95	10YR 5/6	5	C	PL	SiL	
12-18	10YR 6/3	95	10YR 5/8	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 39

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hill slope Swale Local relief (concave, convex, none): Concave Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8633 Long: 82.8929 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 12**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	**X**	No	Depth (inches):	1

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **39**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Rubus allegheniensis*	5	Yes	FACU
2. *Rosa multiflora*	5	Yes	FACU
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Juncus effusus*	40	Yes	FACW
2. *Carex vulpinoidea*	20	Yes	OBL
3. *Juncus anthelatus*	20	Yes	FAC
4. *Eleocharis obtusa*	10	No	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11			
	90	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 60 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is > fifty percent

3 - Prevalence Index is ≤3.0[1]

4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is greater than fifty percent. This observation satisfies the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/2	95	10YR 5/6	5	C	PL	SiL	
12-18	10YR 6/3	95	10YR 5/8	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 40

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 15

Subregion (LRR or MLRA: LRR N Lat: 38.8632 Long: 82.8929 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No		**Within a Wetland?** **Yes** **No** **X**
Wetland Hydrology Present?	Yes		No	**X**	**Out Point for Wetland 12**

Remarks:

This area satisfies only one of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? **Yes** **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **40**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Rubus allegheniensis*	5	Yes	FACU
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	60	Yes	FACU
2. *Anthoxanthum odoratum*	20	Yes	FACU
3. *Pycnanthemum tenuifolium*	5	No	FACW
4. *Eupatorium fistulosum*	5	No	FACW
5. *Juncus effusus*	5	No	FACW
6.			
7.			
8.			
9.			
10.			
11			
	95	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/2	95	10YR 5/6	5	C	PL	SiL	
12-18	10YR 6/3	95	10YR 5/8	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 41

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR or MLRA: LRR N Lat: 38.8636 Long: 82.8924 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 12**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	**X**	No	Depth (inches):	1

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **41**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Rubus allegheniensis*	5	Yes	FACU
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Juncus effusus*	40	Yes	FACW
2. *Carex vulpinoidea*	30	Yes	OBL
3. *Juncus anthelatus*	10	No	FAC
4. *Epilobium coloratum*	10	No	OBL
5. *Apocynum cannabinum*	10	No	FACU
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is > fifty percent

3 - Prevalence Index is ≤3.0[1]

4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is greater than fifty percent. This observation satisfies the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/2	95	10YR 5/6	5	C	PL	SiL	
12-18	10YR 6/3	95	10YR 5/8	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 42

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 7

Subregion (LRR or MLRA: LRR N Lat: 38.8637 Long: 82.8925 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No		**Within a Wetland?** **Yes** **No** **X**
Wetland Hydrology Present?	Yes		No	**X**	**Out Point for Wetland 12**

Remarks:

This area satisfies only one of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? **Yes** **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **42**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Rubus allegheniensis*	20	Yes	FACU
2.			
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	60	Yes	FACU
2. *Eupatorium fistulosum*	20	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	80	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/2	95	10YR 5/6	5	C	PL	SiL	
12-18	10YR 6/3	95	10YR 5/8	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 43

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR or MLRA: LRR N Lat: 38.8638 Long: 82.8926 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 12**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	**X**	No	Depth (inches):	1

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **43**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Juncus effusus*	35	Yes	FACW
2. *Carex vulpinoidea*	35	Yes	OBL
3. *Eleocharis obtusa*	10	No	OBL
4. *Polygonum persicaria*	10	No	FACW
5. *Epilobium coloratum*	10	No	OBL
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominant species observed have a wetland indicator status of FACW or OBL. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/2	95	10YR 5/6	5	C	PL	SiL	
12-18	10YR 6/3	95	10YR 5/8	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 44

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 7

Subregion (LRR or MLRA: LRR N Lat: 38.8638 Long: 82.8927 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No		**Within a Wetland?** **Yes** **No** **X**
Wetland Hydrology Present?	Yes		No	**X**	**Out Point for Wetland 12**

Remarks:

This area satisfies only one of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? **Yes** **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **44**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	70	Yes	FACU
2. *Chrysanthemum leucanthemum*	10	No	UPL
3. *Eupatorium fistulosum*	10	No	FACW
4. *Juncus anthelatus*	5	No	FAC
5. *Juncus effusus*	5	No	FACW
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/2	95	10YR 5/6	5	C	PL	SiL	
12-18	10YR 6/3	95	10YR 5/8	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 45

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR or MLRA: LRR N Lat: 38.8636 Long: 82.8918 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 12**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	**X**	No	Depth (inches):	1

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **45**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Juncus effusus*	90	Yes	FACW
2. *Carex vulpinoidea*	10	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominant species observed has a wetland indicator status of FACW. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/2	95	10YR 5/6	5	C	PL	SiL	
12-18	10YR 6/3	95	10YR 5/8	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 46

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 15

Subregion (LRR or MLRA: LRR N Lat: 38.8636 Long: 82.8917 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No		**Within a Wetland?** **Yes** **No** **X**
Wetland Hydrology Present?	Yes		No	**X**	**Out Point for Wetland 12**

Remarks:

This area satisfies only one of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? **Yes** **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **46**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Rubus allegheniensis*	10	Yes	FACU
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	70	Yes	FACU
2. *Anthoxanthum odoratum*	20	Yes	FACU
3. *Chrysanthemum leucanthemum*	10	No	UPL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/2	95	10YR 5/6	5	C	PL	SiL	
12-18	10YR 6/3	95	10YR 5/8	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 47

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR or MLRA: LRR N Lat: 38.8637 Long: 82.8935 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 12**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **47**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Juncus effusus*	30	Yes	FACW
2. *Carex vulpinoidea*	30	Yes	OBL
3. *Juncus anthelatus*	30	Yes	FAC
4. *Eupatorium fistulosum*	5	No	FACW
5. *Agrostis gigantea*	5	No	FACW
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is > fifty percent

3 - Prevalence Index is ≤3.0[1]

4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is greater than fifty percent. This observation satisfies the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/2	95	10YR 5/6	5	C	PL	SiL	
12-18	10YR 6/3	95	10YR 5/8	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 48

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 5

Subregion (LRR or MLRA: LRR N Lat: 38.8638 Long: 82.8934 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No		**Within a Wetland?** **Yes** **No** **X**
Wetland Hydrology Present?	Yes		No	**X**	**Out Point for Wetland 12**

Remarks:

This area satisfies only one of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? **Yes** **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **48**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Rubus allegheniensis*	20	Yes	FACU
2.			
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	70	Yes	FACU
2. *Erigeron strigosus*	15	No	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	85	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/2	95	10YR 5/6	5	C	PL	SiL	
12-18	10YR 6/3	95	10YR 5/8	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 55

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR or MLRA: LRR N Lat: 38.8644 Long: 82.8923 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 12**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	**X**	No	Depth (inches):	1

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **55**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Carex vulpinoidea*	70	Yes	OBL
2. *Juncus dudleyi*	10	No	FACW
3. *Juncus effusus*	5	No	FACW
4. *Solidago canadensis*	5	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11			
	90	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominant species has a wetland indicator status of OBL. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/2	95	10YR 5/6	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 56

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8643 Long: 82.8924 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No		**Within a Wetland?** **Yes** **No** **X**
Wetland Hydrology Present?	Yes		No	**X**	**Out Point for Wetland 12**

Remarks:

This area satisfies only one of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? **Yes** **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **56**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Rubus allegheniensis*	5	Yes	FACU
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	70	Yes	FACU
2. *Agrostis gigantea*	10	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	80	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/2	95	10YR 5/6	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 49

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR or MLRA: LRR N Lat: 38.8630 Long: 82.8944 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 13**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	**X** Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **49**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Juncus effusus*	30	Yes	FACW
2. *Epilobium coloratum*	20	Yes	OBL
3. *Juncus dudleyi*	15	No	FACW
4. *Carex vulpinoidea*	10	No	OBL
5. *Eleocharis obtusa*	10	No	OBL
6. *Scirpus hattorianus*	10	No	OBL
7.			
8.			
9.			
10.			
11			
	95	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominant species have a wetland indicator status of FACW and OBL. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/2	95	10YR 5/6	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 50

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 7

Subregion (LRR or MLRA: LRR N Lat: 38.8631 Long: 82.8945 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No		**Within a Wetland?** **Yes** **No** **X**
Wetland Hydrology Present?	Yes		No	**X**	**Out Point for Wetland 13**

Remarks:

This area satisfies only one of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? **Yes** **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **50**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	60	Yes	FACU
2. *Bromus commutatus*	30	Yes	UPL
3. *Agrostis gigantea*	10	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/2	95	10YR 5/6	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 53

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR or MLRA: LRR N Lat: 38.8634 Long: 82.8943 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 13**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	**X** Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **53**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Juncus effusus*	60	Yes	FACW
2. *Juncus dudleyi*	10	No	FACW
3. *Ludwigia alternifolia*	10	No	FACW
4. *Bidens polylepis*	10	No	FACW
5. *Solidago canadensis*	10	No	FACU
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominant species has a wetland indicator status of FACW. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/2	95	10YR 5/6	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 54

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 7

Subregion (LRR or MLRA: LRR N Lat: 38.8634 Long: 82.8944 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No		**Within a Wetland?** **Yes** **No** **X**
Wetland Hydrology Present?	Yes		No	**X**	**Out Point for Wetland 13**

Remarks:

This area satisfies only one of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? **Yes** **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **54**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	85	Yes	FACU
2. *Verbesina alternifolia*	5	No	FAC
3. *Agrostis gigantea*	5	No	FACW
4. *Allium vineale*	5	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/2	95	10YR 5/6	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 51

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR or MLRA: LRR N Lat: 38.8635 Long: 82.8947 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 14**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water(A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- **X** Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Water Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- **X** Surface Soil Cracks (B6)
- Sparsely Vegetated Concave Surface (B8)
- **X** Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- **X** FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Scirpus hattorianus*	30	Yes	OBL
2. *Eleocharis obtusa*	25	Yes	OBL
3. *Polygonum persicaria*	15	No	FACW
4. *Agrostis gigantea*	10	No	FACW
5. *Xanthium strumarium*	10	No	FAC
6. *Ambrosia artemisiifolia*	5	No	FACU
7.			
8.			
9.			
10.			
11			
	95	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominant species have a wetland indicator status of OBL. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/2	95	10YR 3/4	5	C	PL	SiL	
12-18	10YR 5/6	95	10YR 4/6	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 52

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 7

Subregion (LRR or MLRA: LRR N Lat: 38.8635 Long: 82.8946 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No		**Within a Wetland?** **Yes** **No** **X**
Wetland Hydrology Present?	Yes		No	**X**	**Out Point for Wetland 14**

Remarks:

This area satisfies only one of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? **Yes** **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **52**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	95	Yes	FACU
2. *Agrostis gigantea*	5	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/2	95	10YR 3/4	5	C	PL	SiL	
12-18	10YR 5/6	95	10YR 4/6	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 57

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR or MLRA: LRR N Lat: 38.8628 Long: 82.8927 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 15**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
Surface Water(A1)	True Aquatic Plants (B14)		Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)		Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X**	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)		Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)		Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)		Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)		Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)			Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)			Geomorphic Position (D2)
Water Stained Leaves (B9)			Shallow Aquitard (D3)
Aquatic Fauna (B13)			Microtopographic Relief (D4)
		X	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **57**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Juncus effusus*	75	Yes	FACW
2. *Scirpus hattorianus*	5	No	OBL
3. *Juncus anthelatus*	5	No	FAC
4. *Eupatorium perfoliatum*	5	No	FACW
5. *Ludwigia alternifolia*	5	No	FACW
6. *Solidago gigantea*	5	No	FACW
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominant species has a wetland indicator status of FACW. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/2	95	10YR 3/4	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 58

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 15

Subregion (LRR or MLRA: LRR N Lat: 38.8628 Long: 82.8928 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No		**Within a Wetland?** **Yes** **No** **X**
Wetland Hydrology Present?	Yes		No	**X**	**Out Point for Wetland 15**

Remarks:

This area satisfies only one of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? **Yes** **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **58**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Rubus allegheniensis*	10	Yes	FACU
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	40	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	40	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1. *Lonicera japonica*	50	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	50	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/2	95	10YR 3/4	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 61

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Level Slope (%): 1

Subregion (LRR or MLRA: LRR N Lat: 38.8636 Long: 82.8962 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland? Yes No X**
Wetland Hydrology Present?	Yes	No	**X**	**General Out Point**

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **61**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Platanus occidentalis*	10	Yes	FACW
2. *Prunus serotina*	10	Yes	FACU
3.			
4.			
5.			
	20	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Rubus occidentalis*	5	Yes	FACU
2. *Robinia pseudoacacia*	5	Yes	FACU
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	30	Yes	FACU
2. *Phalaris arundinacea*	30	Yes	FACW
3. *Verbesina alternifolia*	15	No	FAC
4. *Phytolacca americana*	5	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11			
	80	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/3	100					SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 62

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Stream Terrace Local relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR or MLRA: LRR N Lat: 38.88623 Long: 82.8993 Datum: NAD 27

Soil Map Unit Name: Ha – Haymond silt loam, occasionally flooded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 16**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
X Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	**X**	No		Depth (inches):	0.5
Water Table Present?	Yes		No	**X**	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	**X**	No		Depth (inches):	1

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **62**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Sambucus canadensis*	5	Yes	FACW
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Phalaris arundinacea*	90	Yes	FACW
2. *Impatiens capensis*	10	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominant species have a wetland indicator status of FACW. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	2.5Y 5/2	95	10YR 3/4	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 63

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Road Embankment Local relief (concave, convex, none): Convex Slope (%): 15

Subregion (LRR or MLRA: LRR N Lat: 38.8623 Long: 82.8994 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland? Yes No X**
Wetland Hydrology Present?	Yes	No	**X**	**Out Point for Wetland 16**

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **63**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Rhus copallinum*	10	Yes	FACU
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	35	Yes	FACU
2. *Verbesina alternifolia*	35	Yes	FAC
3. *Calystegia sepium*	10	No	FAC
4. *Hemerocallis fulva*	10	No	UPL
5.			
6.			
7.			
8.			
9.			
10.			
11			
	90	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	IMPENETRABLE						Fill	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Yes

Type: Fill

Depth (inches): 1

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 64

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR or MLRA: LRR N Lat: 38.8467 Long: 82.8577 Datum: NAD 27

Soil Map Unit Name: OmB – Omulga silt loam, 1 to 8 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 17**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
X Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes		No	**X**	Depth (inches):	
Water Table Present?	Yes		No	**X**	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	**X**	No		Depth (inches):	10

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **64**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Scirpus hattorianus*	30	Yes	OBL
2. *Juncus anthelatus*	30	Yes	FAC
3. *Apocynum cannabinum*	20	Yes	FACU
4. *Panicum clandestinum*	20	Yes	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is > fifty percent

3 - Prevalence Index is ≤3.0[1]

4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is greater than fifty percent. This observation satisfies the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 5/2	95	10YR 4/4	5	C	PL	SiL	
14-18	10YR 6/6	95	10YR 5/6	5	C	PL	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 65

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8467 Long: 82.8578 Datum: NAD 27

Soil Map Unit Name: OmB – Omulga silt loam, 1 to 8 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No		**Within a Wetland?** **Yes** **No** **X**
Wetland Hydrology Present?	Yes		No	**X**	**Out Point for Wetland 17**

Remarks:

This area satisfies only one of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? **Yes** **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **65**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Carex hirsutella*	30	Yes	FACU
2. *Festuca elatior*	30	Yes	FACU
3. *Vernonia gigantea*	10	No	FAC
4. *Andropogon virginicus*	10	No	FACU
5. *Solidago canadensis*	10	No	FACU
6. *Trifolium campestre*	10	No	UPL
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 5/2	95	10YR 4/4	5	C	PL	SiL	
14-18	10YR 6/6	95	10YR 5/6	5	C	PL	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 66

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8460 Long: 82.8575 Datum: NAD 27

Soil Map Unit Name: OmB – Omulga silt loam, 1 to 8 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 18/W9WL2**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- **X** Surface Water(A1)
- High Water Table (A2)
- **X** Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Water Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Sparsely Vegetated Concave Surface (B8)
- **X** Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- **X** FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	**X**	No		Depth (inches):	0.5
Water Table Present?	Yes		No	**X**	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	**X**	No		Depth (inches):	1

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **66**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Panicum clandestinum*	50	Yes	FAC
2. *Boehmeria cylindrica*	20	Yes	FACW
3. *Verbesina alternifolia*	10	No	FAC
4. *Impatiens capensis*	5	No	FACW
5. *Scirpus hattorianus*	5	No	OBL
6.			
7.			
8.			
9.			
10.			
11			
	90	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1. *Toxicodendron radicans*	10	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	10	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is > fifty percent

3 - Prevalence Index is ≤3.0[1]

4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is greater than fifty percent. This observation satisfies the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/2	95	10YR 5/6	5	C	PL	SiL	
>12	IMPENETRABLE						Rock	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Yes

Type: Rock

Depth (inches): 12

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 67

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8460 Long: 82.8578 Datum: NAD 27

Soil Map Unit Name: OmB – Omulga silt loam, 1 to 8 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland? Yes No X**
Wetland Hydrology Present?	Yes	No	**X**	**Out Point for Wetland 18/W9WL2**

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **67**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	20	Yes	FACU
2. *Festuca elatior*	15	Yes	FACU
3. *Carex hirsutella*	10	Yes	FACU
4. *Pycnanthemum tenuifolium*	5	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11			
	50	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1. *Lonicera japonica*	50	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	50	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/3						SiL	
6-18	10YR 5/7	95	10YR 5/6	5	C	PL	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 68

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Pond Fringe Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA: LRR N Lat: 38.8454 Long: 82.8582 Datum: NAD 27

Soil Map Unit Name: OmB – Omulga silt loam, 1 to 8 percent slopes NWI Classification: PUBGH

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 19**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
X Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	**X**	No		Depth (inches):	0.5
Water Table Present?	Yes		No	**X**	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	**X**	No		Depth (inches):	1

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **68**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Panicum clandestinum*	60	Yes	FAC
2. *Juncus anthelatus*	10	No	FAC
3. *Juncus effusus*	10	No	FACW
4. *Carex lurida*	10	No	OBL
5. *Scirpus hattorianus*	10	No	OBL
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is > fifty percent

3 - Prevalence Index is ≤3.0[1]

4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is greater than fifty percent. This observation satisfies the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/2	95	10YR 4/4	5	C	PL	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 69

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 7

Subregion (LRR or MLRA: LRR N Lat: 38.8453 Long: 82.8581 Datum: NAD 27

Soil Map Unit Name: OmB – Omulga silt loam, 1 to 8 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**	
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland?**	**Yes** **No** **X**
Wetland Hydrology Present?	Yes	No	**X**	**Out Point for Wetland 19**	

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? **Yes** **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **69**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Schizachyrium scoparium*	40	Yes	FACU
2. *Festuca elatior*	40	Yes	FACU
3. *Vernonia gigantea*	5	No	FAC
4. *Solidago canadensis*	5	No	FACU
5. *Rudbeckia hirta*	5	No	FACU
6. *Daucus carota*	5	No	UPL
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/3						SiL	
6-15	10YR 6/6						SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 70

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA: LRR N Lat: 38.8451 Long: 82.8575 Datum: NAD 27

Soil Map Unit Name: OmB – Omulga silt loam, 1 to 8 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 20**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	**X**	No	Depth (inches):	1

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **70**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Scirpus hattorianus*	60	Yes	OBL
2. *Panicum clandestinum*	20	Yes	FAC
3. *Juncus anthelatus*	10	No	FAC
4. *Carex vulpinoidea*	10	No	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is > fifty percent

3 - Prevalence Index is ≤3.0[1]

4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is greater than fifty percent. This observation satisfies the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/2	95	10YR 4/4	5	C	PL	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 71

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 7

Subregion (LRR or MLRA: LRR N Lat: 38.8451 Long: 82.8574 Datum: NAD 27

Soil Map Unit Name: OmB – Omulga silt loam, 1 to 8 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**	
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland?**	**Yes** **No** **X**
Wetland Hydrology Present?	Yes	No	**X**	**Out Point for Wetland 20**	

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? **Yes** **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **71**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Schizachyrium scoparium*	30	Yes	FACU
2. *Carex hirsutella*	30	Yes	FACU
3. *Trifolium campestre*	10	No	UPL
4. *Asclepias hirtella*	10	No	UPL
5. *Eupatorium coelestinum*	10	No	FAC
6. *Festuca elatior*	10	No	FACU
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/3						SiL	
6-15	10YR 6/6						SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 72

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA: LRR N Lat: 38.8451 Long: 82.8568 Datum: NAD 27

Soil Map Unit Name: OmB – Omulga silt loam, 1 to 8 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 21**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water(A1)
- High Water Table (A2)
- **X** Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Water Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Sparsely Vegetated Concave Surface (B8)
- **X** Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- **X** FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes		No	**X**	Depth (inches):
Water Table Present?	Yes		No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	**X**	No		Depth (inches): 1

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **72**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Scirpus hattorianus*	30	Yes	OBL
2. *Carex vulpinoidea*	30	Yes	OBL
3. *Juncus anthelatus*	15	No	FAC
4. *Apocynum cannabinum*	15	No	FACU
5. *Eupatorium coelestinum*	10	No	FAC
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominant species observed have a wetland indicator status of OBL. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/2	95	10YR 4/4	5	C	PL	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 73

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 7

Subregion (LRR or MLRA: LRR N Lat: 38.8450 Long: 82.8568 Datum: NAD 27

Soil Map Unit Name: OmB – Omulga silt loam, 1 to 8 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**	
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland?**	**Yes** **No** **X**
Wetland Hydrology Present?	Yes	No	**X**	**Out Point for Wetland 21**	

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? **Yes** **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **73**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Solidago canadensis*	60	Yes	FACU
2. *Apocynum cannabinum*	10	No	FACU
3. *Achillea millefolium*	10	No	FACU
4. *Tridens flavus*	10	No	FACU
5. *Allium vineale*	10	No	FACU
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/3						SiL	
6-15	10YR 6/6						SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 74

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA: LRR N Lat: 38.8439 Long: 85.8575 Datum: NAD 27

Soil Map Unit Name: ErD – Ernest silt loam, 15 to 25 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland W9WL4**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water(A1)
- High Water Table (A2)
- **X** Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Water Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Sparsely Vegetated Concave Surface (B8)
- **X** Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- **X** FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes		No	**X**	Depth (inches):
Water Table Present?	Yes		No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	**X**	No		Depth (inches): 1

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **74**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Scirpus hattorianus*	70	Yes	OBL
2. *Juncus effusus*	15	No	FACW
3. *Panicum rigidulum*	15	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominant species observed has a wetland indicator status of OBL. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/2	95	10YR 4/4	5	C	PL	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 75

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 7

Subregion (LRR or MLRA: LRR N Lat: 38.8440 Long: 82.8575 Datum: NAD 27

Soil Map Unit Name: ErD – Ernest silt loam, 15 to 25 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland? Yes No X**
Wetland Hydrology Present?	Yes	No	**X**	**Out Point for Wetland W9WL4**

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **75**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Schizachyrium scoparium*	30	Yes	FACU
2. *Panicum lanuginosum*	20	Yes	FAC
3. *Achillea millefolium*	10	No	FACU
4. *Vernonia gigantea*	10	No	FAC
5. *Plantago lanceolata*	10	No	UPL
6.			
7.			
8.			
9.			
10.			
11			
	80	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	10YR 5/4						SiL	
11-18	10YR 5/6						SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 76

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Stream Channel Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA: LRR N Lat: 38.8441 Long: 82.8571 Datum: NAD 27

Soil Map Unit Name: ErD – Ernest silt loam, 15 to 25 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No		**Is the Sampled Area**
Hydric Soils Present?	Yes		No	**X**	**Within a Wetland?** **Yes** **No** **X**
Wetland Hydrology Present?	Yes	**X**	No		**General Out Point**

Remarks:

This area satisfies only two of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
X Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? **Yes** **X** **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **76**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Rosa multiflora*	10	Yes	FACU
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Panicum clandestinum*	90	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	90	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1. *Lonicera japonica*	20	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	20	= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is greater than fifty percent. This observation satisfies the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 4/3						SiL	
>14	IMPENETRABLE						Rock	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Yes

Type: Rock

Depth (inches): 14

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 77

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 7

Subregion (LRR or MLRA: LRR N Lat: 38.8438 Long: 82.8570 Datum: NAD 27

Soil Map Unit Name: ErD – Ernest silt loam, 15 to 25 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland? Yes No X**
Wetland Hydrology Present?	Yes	No	**X**	**General Out Point**

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **77**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Schizachyrium scoparium*	30	Yes	FACU
2. *Panicum clandestinum*	30	Yes	FAC
3. *Solidago canadensis*	30	Yes	FACU
4. *Juncus dudleyi*	10	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 5/4						SiL	
>6	IMPENETRABLE						Rock	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Yes

Type: Rock

Depth (inches): 6

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 78

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Pond Fringe Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA: LRR N Lat: 38.8416 Long: 82.8559 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: PUBGH

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 22**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- **X** Surface Water(A1)
- High Water Table (A2)
- **X** Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Water Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Sparsely Vegetated Concave Surface (B8)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- **X** FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	**X**	No		Depth (inches):	1
Water Table Present?	Yes		No	**X**	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	**X**	No		Depth (inches):	1

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **78**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Juncus effusus*	40	Yes	FACW
2. *Typha latifolia*	40	Yes	OBL
3. *Leersia oryzoides*	20	Yes	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:	
OBL Species	× 1 =	
FACW Species	× 2 =	
FAC Species	× 3 =	
FACU Species	× 4 =	
UPL Species	× 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominant species observed have a wetland indicator status of OBL and FACW. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	2.5Y 6/1	95	10YR 5/6	5	C	PL	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 79

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 7

Subregion (LRR or MLRA: LRR N Lat: 38.8415 Long: 82.8558 Datum: NAD 27

Soil Map Unit Name: ErD – Ernest silt loam, 15 to 25 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**	
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland?**	**Yes** **No** **X**
Wetland Hydrology Present?	Yes	No	**X**	**Out Point for Wetland 22**	

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? **Yes** **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **79**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Festuca elatior*	60	Yes	FACU
2. *Poa pratensis*	15	No	FACU
3. *Trifolium repens*	10	No	FACU
4. *Trifolium campestre*	5	No	UPL
5.			
6.			
7.			
8.			
9.			
10.			
11			
	90	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/3						SiL	
5-18	10YR 6/6						SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 81

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 7

Subregion (LRR or MLRA: LRR N Lat: 38.8427 Long: 82.8575 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland? Yes No X**
Wetland Hydrology Present?	Yes	No	**X**	**General Out Point**

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Festuca elatior*	30	Yes	FACU
2. *Anthoxanthum odoratum*	30	Yes	FACU
3. *Dactylis glomerata*	30	Yes	FACU
4. *Trifolium pratense*	5	No	FACU
5. *Trifolium campestre*	5	No	UPL
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/3						SiL	
5-18	10YR 6/4	95	10YR 5/6	5	C	PL	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 82

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA: LRR N Lat: 38.8426 Long: 82.8564 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 24**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
X Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	**X**	No		Depth (inches):	1
Water Table Present?	Yes		No	**X**	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	**X**	No		Depth (inches):	1

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **82**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Panicum clandestinum*	60	Yes	FAC
2. *Scirpus hattorianus*	20	Yes	OBL
3. *Carex vulpinoidea*	10	No	OBL
4. *Aster pilosus*	5	No	UPL
5. *Agrostis gigantea*	5	No	FACW
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- **X** 2 - Dominance Test is > fifty percent
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is greater than fifty percent. This observation satisfies the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/2	95	10YR 5/6	5	C	PL	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 83

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 7

Subregion (LRR or MLRA: LRR N Lat: 38.8426 Long: 82.8565 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland? Yes No X**
Wetland Hydrology Present?	Yes	No	**X**	**Out Point for Wetland 24**

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **83**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Anthoxanthum odoratum*	30	Yes	FACU
2. *Solidago canadensis*	20	Yes	FACU
3. *Schizachyrium scoparium*	15	No	FACU
4. *Festuca elatior*	10	No	FACU
5. *Agrostis gigantea*	5	No	FACW
6. *Panicum clandestinum*	5	No	FAC
7.			
8.			
9.			
10.			
11			
	85	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 5/4						SiL	
5-18	10YR 6/6						SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 85

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8410 Long: 82.8565 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland? Yes No X**
Wetland Hydrology Present?	Yes	No	**X**	**General Out Point**

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Trifolium campestre*	30	Yes	UPL
2. *Vernonia gigantea*	30	Yes	FAC
3. *Erigeron annuus*	30	Yes	FACU
4. *Festuca elatior*	5	No	FACU
5. *Asclepias syriaca*	5	No	FACU
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 5/4						SiL	
5-18	10YR 6/6						SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 86

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8405 Long: 82.8561 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 26**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	**X**	No	Depth (inches):	0.5

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **86**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Juncus effusus*	30	Yes	FACW
2. *Scirpus hattorianus*	30	Yes	OBL
3. *Agrostis gigantea*	20	Yes	FACW
4. *Juncus dudleyi*	10	No	FACW
5. *Carex vulpinoidea*	10	No	OBL
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominant species have a wetland indicator status of OBL and FACW. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 5/1	95	10YR 4/4	5	C	PL	SiL	
10-18	10YR 5/2	95	10YR 5/6	5	C	PL	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 87

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8404 Long: 82.8561 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland? Yes No X**
Wetland Hydrology Present?	Yes	No	**X**	**Out Point for Wetland 26**

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **87**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Erigeron strigosus*	30	Yes	FACU
2. *Salvia lyrata*	20	Yes	UPL
3. *Trifolium repens*	20	Yes	FACU
4. *Festuca elatior*	10	No	FACU
5. *Solidago juncea*	5	No	UPL
6. *Dactylis glomerata*	5	No	FACU
7.			
8.			
9.			
10.			
11			
	90	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/3						SiL	
>6	IMPENETRABLE						Rock	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Yes

Type: Rock

Depth (inches): 6

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 90

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8398 Long: 82.8560 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 26**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water(A1)
- High Water Table (A2)
- **X** Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Water Stained Leaves (B9)
- Aquatic Fauna (B13)
- True Aquatic Plants (B14)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Sparsely Vegetated Concave Surface (B8)
- **X** Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- **X** FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes		No	**X**	Depth (inches):
Water Table Present?	Yes		No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	**X**	No		Depth (inches): 0.5

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **90**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Scirpus hattorianus*	90	Yes	OBL
2. *Carex vulpinoidea*	10	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:	
OBL Species	× 1 =	
FACW Species	× 2 =	
FAC Species	× 3 =	
FACU Species	× 4 =	
UPL Species	× 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominant species has a wetland indicator status of OBL. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 5/1	95	10YR 4/4	5	C	PL	SiL	
10-18	10YR 5/2	95	10YR 5/6	5	C	PL	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 91

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8397 Long: 82.8560 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No		**Within a Wetland?** **Yes** **No** **X**
Wetland Hydrology Present?	Yes		No	**X**	**Out Point for Wetland 26**

Remarks:

This area satisfies only one of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? **Yes** **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **91**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Vernonia gigantea*	30	Yes	FAC
2. *Erigeron strigosus*	20	Yes	FACU
3. *Trifolium repens*	20	Yes	FACU
4. *Solidago canadensis*	20	Yes	FACU
5. *Festuca elatior*	5	No	FACU
6. *Dactylis glomerata*	5	No	FACU
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 5/1	95	10YR 4/4	5	C	PL	SiL	
10-18	10YR 5/2	95	10YR 5/6	5	C	PL	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)		Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)	**X**	Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 92

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8396 Long: 82.8559 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 26**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	**X**	No	Depth (inches):	0.5

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **92**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Scirpus hattorianus*	90	Yes	OBL
2. *Carex vulpinoidea*	10	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:	
OBL Species	× 1 =	
FACW Species	× 2 =	
FAC Species	× 3 =	
FACU Species	× 4 =	
UPL Species	× 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominant species has a wetland indicator status of OBL. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 5/1	95	10YR 4/4	5	C	PL	SiL	
10-18	10YR 5/2	95	10YR 5/6	5	C	PL	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 93

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8395 Long: 82.8559 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No		**Within a Wetland?** **Yes** **No** **X**
Wetland Hydrology Present?	Yes		No	**X**	**Out Point for Wetland 26**

Remarks:

This area satisfies only one of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? **Yes** **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **93**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Vernonia gigantea*	30	Yes	FAC
2. *Erigeron strigosus*	20	Yes	FACU
3. *Trifolium repens*	20	Yes	FACU
4. *Solidago canadensis*	20	Yes	FACU
5. *Festuca elatior*	5	No	FACU
6. *Dactylis glomerata*	5	No	FACU
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 5/1	95	10YR 4/4	5	C	PL	SiL	
10-18	10YR 5/2	95	10YR 5/6	5	C	PL	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)		Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)	**X**	Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 94

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8400 Long: 82.8553 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 26**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes		No **X**	Depth (inches):	
Water Table Present?	Yes		No **X**	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	**X**	No	Depth (inches):	0.5

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **94**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Juncus effusus*	90	Yes	FACW
2. *Agrostis gigantea*	10	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominant species has a wetland indicator status of FACW. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/2	95	10YR 5/6	5	C	PL	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 95

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8400 Long: 82.8554 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No		**Within a Wetland?** **Yes** **No** **X**
Wetland Hydrology Present?	Yes		No	**X**	**Out Point for Wetland 26**

Remarks:

This area satisfies only one of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? **Yes** **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **95**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Erigeron strigosus*	30	Yes	FACU
2. *Solidago canadensis*	30	Yes	FACU
3. *Panicum clandestinum*	15	No	FAC
4. *Trifolium repens*	10	No	FACU
5. *Festuca elatior*	10	No	FACU
6. *Asclepias hirtella*	5	No	UPL
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/2	95	10YR 5/6	5	C	PL	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)		Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)	**X**	Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 89

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8401 Long: 82.8561 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No		**Within a Wetland? Yes** **No X**
Wetland Hydrology Present?	Yes		No	**X**	**General Out Point**

Remarks:

This area satisfies only one of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Erigeron strigosus*	20	Yes	FACU
2. *Solidago canadensis*	20	Yes	FACU
3. *Trifolium repens*	20	Yes	FACU
4. *Vernonia gigantea*	20	Yes	FAC
5. *Festuca elatior*	10	No	FACU
6. *Anthoxanthum odoratum*	10	No	FACU
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 5/2	95	10YR4/4	5	C	PL	SiL	
16-18	10YR 6/4	95	10YR 5/6	5	C	PL	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)		Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)	**X**	Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 96

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Pond Fringe Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA: LRR N Lat: 38.8374 Long: 82.8557 Datum: NAD 27

Soil Map Unit Name: OmB – Omulga silt loam, 1 to 8 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 28**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
X Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	**X**	No		Depth (inches):	2
Water Table Present?	Yes		No	**X**	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	**X**	No		Depth (inches):	1

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **96**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. *Salix exigua*	10	Yes	OBL
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Typha latifolia*	85	Yes	OBL
2. *Carex vulpinoidea*	5	No	OBL
3. *Leersia oryzoides*	5	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	95	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominant species have a wetland indicator status of OBL. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/2	95	10YR4/6	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 97

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8373 Long: 82.8559 Datum: NAD 27

Soil Map Unit Name: OmB – Omulga silt loam, 1 to 8 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**	
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland?**	**Yes** **No** **X**
Wetland Hydrology Present?	Yes	No	**X**	**Out Point for Wetland 28**	

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? **Yes** **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **97**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Poa pratensis*	40	Yes	FACU
2. *Festuca elatior*	40	Yes	FACU
3. *Trifolium repens*	10	No	FACU
4. *Plantago lanceolata*	10	No	UPL
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/3						SiL	
>6	IMPENETRABLE						Rock	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Yes

Type: Rock

Depth (inches): 6

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 98

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Pond Fringe Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8517 Long: 82.8729 Datum: NAD 27

Soil Map Unit Name: OmB – Omulga silt loam, 1 to 8 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 29**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
X Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	**X**	No		Depth (inches):	1
Water Table Present?	Yes		No	**X**	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	**X**	No		Depth (inches):	1

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **98**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Carex lurida*	50	Yes	OBL
2. *Leersia oryzoides*	30	Yes	OBL
3. *Juncus effusus*	10	No	FACW
4. *Agrostis gigantea*	10	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominant species have a wetland indicator status of OBL. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	2.5Y 4/1	95	10YR3/4	5	C	PL	SiL	
>12	IMPENETRABLE						Rock	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Yes

Type: Rock

Depth (inches): 12

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 99

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8517 Long: 82.8730 Datum: NAD 27

Soil Map Unit Name: OmB – Omulga silt loam, 1 to 8 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No		**Within a Wetland?** **Yes** **No** **X**
Wetland Hydrology Present?	Yes		No	**X**	**Out Point for Wetland 29**

Remarks:

This area satisfies only one of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? **Yes** **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **99**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Festuca elatior*	60	Yes	FACU
2. *Panicum clandestinum*	15	No	FAC
3. *Juncus dudleyi*	10	No	FAC
4. *Asclepias syriaca*	5	No	FACU
5. *Asclepias hirtella*	5	No	UPL
6. *Vernonia gigantea*	5	No	FAC
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	2.5Y 4/1	95	10YR3/4	5	C	PL	SiL	
>12	IMPENETRABLE						Rock	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Yes

Type: Rock

Depth (inches): 12

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 100

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8501 Long: 82.8695 Datum: NAD 27

Soil Map Unit Name: SfE – Shelocta-Wharton-Latham association, steep NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 30**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	**X** Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
X Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **100**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Carex vulpinoidea*	40	Yes	OBL
2. *Scirpus hattorianus*	40	Yes	OBL
3. *Juncus effusus*	20	Yes	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominant species have a wetland indicator status of OBL and FACW. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 5/2	95	10YR3/4	5	C	PL	SiL	
6-13	10YR 6/4	95	10YR 5/6	5	C	PL	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 101

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8500 Long: 82.8695 Datum: NAD 27

Soil Map Unit Name: SfE – Shelocta-Wharton-Latham association, steep NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No		**Within a Wetland?** **Yes** **No** **X**
Wetland Hydrology Present?	Yes		No	**X**	**Out Point for Wetland 30**

Remarks:

This area only satisfies one of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? **Yes** **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **101**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Festuca elatior*	45	Yes	FACU
2. *Dactylis glomerata*	45	Yes	FACU
3. *Trifolium repens*	10	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 5/2	95	10YR3/4	5	C	PL	SiL	
6-15	10YR 6/4	95	10YR 5/6	5	C	PL	SiCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes X No

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 102

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA: LRR N Lat: 38.8497 Long: 82.8693 Datum: NAD 27

Soil Map Unit Name: SfE – Shelocta-Wharton-Latham association, steep NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 31**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
X Surface Water(A1)	True Aquatic Plants (B14)	**X** Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	**X**	No		Depth (inches):	2
Water Table Present?	Yes		No	**X**	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes		No	**X**	Depth (inches):	

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **102**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Typha angustifolia*	40	Yes	OBL
2. *Scirpus hattorianus*	40	Yes	OBL
3. *Juncus effusus*	20	Yes	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominant species have a wetland indicator status of OBL and FACW. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 5/2	95	10YR 4/4	5	C	PL	SiCL	
>7	IMPENETRABLE						Rock	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Yes

Type: Rock

Depth (inches): 7

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 103

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8497 Long: 82.8693 Datum: NAD 27

Soil Map Unit Name: SfE – Shelocta-Wharton-Latham association, steep NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**	
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland?**	**Yes** **No** **X**
Wetland Hydrology Present?	Yes	No	**X**	**Out Point for Wetland 31**	

Remarks:

This area only satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? **Yes** **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **103**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus virginiana*	20	Yes	UPL
2.			
3.			
4.			
5.			
	20	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Festuca elatior*	20	Yes	FACU
2. *Carex hirtifolia*	15	No	UPL
3. *Penstemon digitalis*	10	No	FAC
4. *Daucus carota*	10	No	UPL
5. *Solidago juncea*	10	No	UPL
6. *Rudbeckia hirta*	10	No	FACU
7. *Trifolium campestre*	5	No	UPL
8.			
9.			
10.			
11			
	80	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 5/6						SiCL w/ Gravel	
>6	IMPENETRABLE							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Yes

Type: Rock

Depth (inches): 6

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 104

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA: LRR N Lat: 38.8643 Long: 82.8962 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 32**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
X Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	**X**	No		Depth (inches):	2
Water Table Present?	Yes		No	**X**	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	**X**	No		Depth (inches):	1

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **104**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Leersia oryzoides*	70	Yes	OBL
2. *Carex lurida*	20	Yes	OBL
3. *Boehmeria cylindrica*	5	No	FACW
4. *Impatiens capensis*	5	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:	
OBL Species	× 1 =	
FACW Species	× 2 =	
FAC Species	× 3 =	
FACU Species	× 4 =	
UPL Species	× 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominant species have a wetland indicator status of OBL. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	10YR 4/1	95	10YR 4/6	5	C	PL	SiCL	
>11	IMPENETRABLE						Rock	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Yes

Type: Rock

Depth (inches): 11

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 105

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 5

Subregion (LRR or MLRA: LRR N Lat: 38.8643 Long: 82.8961 Datum: NAD 27

Soil Map Unit Name: MoC2 – Monongahela silt loam, 8 to 15 percent slopes, eroded NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **X** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland? Yes No X**
Wetland Hydrology Present?	Yes	No	**X**	**Out Point for Wetland 32**

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **105**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Festuca elatior*	50	Yes	FACU
2. *Solidago canadensis*	50	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/3						SiL w/ Gravel	
>4	IMPENETRABLE							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Yes

Type: Rock

Depth (inches): 4

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 9.13.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 106

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Pond Fringe Local relief (concave, convex, none): Concave Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8502 Long: 82.8699 Datum: NAD 27

Soil Map Unit Name: SfE – Shelocta-Wharton-Latham association, steep NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **x** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 33**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
X Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes		No	**X**	Depth (inches):
Water Table Present?	Yes		No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	**X**	No		Depth (inches): 2

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **106**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Eleocharis obtusa*	40	Yes	OBL
2. *Polygonum pennsylvanica*	40	Yes	facw
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	80	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominant species have a wetland indicator status of OBL and FACW. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/2	95	10YR3/4	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 6.2.11 to 7.21.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 107

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8803 Long: 82.8698 Datum: NAD 27

Soil Map Unit Name: SfE – Shelocta-Wharton-Latham association, steep NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **x** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No		**Within a Wetland? Yes** **No X**
Wetland Hydrology Present?	Yes		No	**X**	**Out Point for Wetland 33**

Remarks:

This area only satisfies one of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **107**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Festuca elatior*	45	Yes	FACU
2. *Dactylis glomerata*	45	Yes	facu
3. *Trifolium repens*	10	No	facu
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/2	95	10YR3/4	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 9.13.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 108

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA: LRR N Lat: 38.8540 Long: 82.8826 Datum: NAD 27

Soil Map Unit Name: OmB – Omulga silt loam, 1 to 8 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **x** No (If no, explain in Remarks.)

Are vegetation **,** Soil **,** or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation **,** Soil **,** or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 34**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **108**

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Impatiens capensis*	20	Yes	facw
2. *Eupatorium perfoliatum*	20	Yes	facw
3. *Polygonum pensylvanicum*	20	Yes	facw
4. *Bidens frondosa*	20	Yes	FACW
5. *Boehmeria cylindrica*	20	Yes	facw
6.			
7.			
8.			
9.			
10.			
11			
	80	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The dominant species have a wetland indicator status of FACW. This observation satisfies the Rapid Test for Hydrophytic Vegetation.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/2	95	10YR3/4	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 9.13.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 109

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Level Slope (%): 1

Subregion (LRR or MLRA: LRR N Lat: 38.8540 Long: 82.8828 Datum: NAD 27

Soil Map Unit Name: OmB – Omulga silt loam, 1 to 8 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **x** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes		No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No		**Within a Wetland? Yes** **No X**
Wetland Hydrology Present?	Yes		No	**X**	**Out Point for Wetland 34**

Remarks:

This area only satisfies one of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **109**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Festuca elatior*	50	Yes	FACU
2. *Dactylis glomerata*	50	Yes	facu
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/2	95	10YR3/4	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 9.13.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 110

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA: LRR N Lat: 38.8516 Long: 82.9115 Datum: NAD 27

Soil Map Unit Name: OmB – Omulga silt loam, 1 to 8 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **x** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**X**	No	**Is the Sampled Area**
Hydric Soils Present?	Yes	**X**	No	**Within a Wetland? Yes X No**
Wetland Hydrology Present?	Yes	**X**	No	**Wetland 35**

Remarks:

This area satisfies the three criteria necessary for a positive wetland determination. This area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
x Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
x Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	**X** Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	**x**	No		Depth (inches):	2
Water Table Present?	Yes		No	**X**	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	**x**	No		Depth (inches):	1

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were observed. This observation satisfies the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **110**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	20	Yes	Fac
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Leersia oryzoides*	70	Yes	obl
2. *Eupatorium perfoliatum*	10	No	facw
3. *Impatiens capensis*	10	No	facw
4. *Boehmeria cylindrica*	10	No	facw
5.			
6.			
7.			
8.			
9.			
10.			
11			
	80	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- **x** 2 - Dominance Test is > fifty percent
- 3 - Prevalence Index is ≤3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is greater than fifty percent. This observation satisfies the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 5/2	95	10YR3/4	5	C	PL	SiL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol (A1)		Dark Surface (S7)
Histic Epipedon (A2)		Polyvalue Below Surface (S8) **(MLRA 147, 148)**
Black Histic (A3)		Thin Dark Surface (S9) **(MLRA 147, 148)**
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)
Stratified Layers (A5)	**X**	Depleted Matrix (F3)
2 cm Muck (A10) **(LRR N)**		Redox Dark Surface (F6)
Depleted Below Dark Surface (A11)		Depleted Dark Surface (F7)
Thick Dark Surface (A12)		Redox Depression (F8)
Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**		Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
Sandy Gleyed Matrix (S4)		Umbric Surface (F13) **(MLRA 136, 122)**
Sandy Redox (S5)		Piedmont Floodplain Soils (F19) **(MLRA 148)**
Stripped Matrix (S6)		

Indicators for Problematic Hydric Soils [3]:

2 cm Muck (A10) **(MLRA 147)**

Coast Prairie Redox (A16) **(MLRA 136, 147)**

Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**

Red Parent Material (TF2)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **X** **No**

Remarks:

The soils in this area correspond to the Depleted Matrix (F3) hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation satisfies the soils criterion.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: SCI-823 City/County: Portsmouth/Scioto Co. Sampling Date: 9.13.11

Applicant/Owner: Ohio Department of Transportation State: OH Sampling Point: 111

Investigator(s): Len Mikles, Jason Earley, and Richard Paul

Landform (hillslope, terrace, etc.): Road Embankment Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA: LRR N Lat: 38.8516 Long: 82.9114 Datum: NAD 27

Soil Map Unit Name: OmB – Omulga silt loam, 1 to 8 percent slopes NWI Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes **x** No (If no, explain in Remarks.)

Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes **X** No

Are vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No	**X**	**Is the Sampled Area**
Hydric Soils Present?	Yes	No	**X**	**Within a Wetland? Yes No X**
Wetland Hydrology Present?	Yes	No	**X**	**Out Point for Wetland 35**

Remarks:

This area satisfies none of the three criteria necessary for a positive wetland determination. This area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
Surface Water(A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	**X**	Depth (inches):
Water Table Present?	Yes	No	**X**	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	**X**	Depth (inches):

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology indicators were not observed. This observation does not satisfy the hydrology criterion.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: **111**

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft)			
1. *Festuca elatior*	40	Yes	FACU
2. *Sorghum halepense*	40	Yes	FACU
3. *Polygonum cuspidatum*	10	No	facu
4. *Impatiens capensis*	10	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11			
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	

Dominance Test Worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL Species	× 1 =
FACW Species	× 2 =
FAC Species	× 3 =
FACU Species	× 4 =
UPL Species	× 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation
2 - Dominance Test is > fifty percent
3 - Prevalence Index is ≤3.0[1]
4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

The Dominance Test is not greater than fifty percent. This observation does not satisfy the vegetation criterion.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	Impenetrable Fill						Fill	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depression (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils [3]:

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 136, 147)**
- Piedmont Floodplain Soils (F19) **(MLRA 147, 148)**
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** **No** **X**

Remarks:

The soils in this area do not correspond to any of the hydric soil indicator presented in the Field Indicators of Hydric Soils in the United States, Version 7.0 (2010). This observation does not satisfy the soils criterion.

Appendix 4
Agency Data Requests

POTENTIAL INDIANA BAT HABITAT CHARACTERIZATION WORKSHEET FOR LV1 (MOA) LEVEL ECOLOGICAL SURVEYS OR MINOR LV2 ESR

Which Indiana bat Management Unit (see map) does the project primarily occur within?	W		C		NE	
	S	X			E	
Are there any known or suspected **hibernacula** within 10 miles of the project (DNAP - Natural Heritage Database records)?	Y		N	X		
• If yes, list the total number and the distance to the closest record.	#:			mi.		
Are there any known Indiana bat capture records within 5 miles of the project (DNAP - Natural Heritage Database records)?	Y		N	X		
• If yes, list the total number and the distance to the closest record.	#:			mi.		
Total number of potential Indiana bat habitat **roost trees** impacted by the project.	#:	**Unknown**				
• Number of these trees that are considered **isolated**.	#:	**Unknown**				
Total number of potential Indiana bat habitat **maternity roost trees** impacted by the project.	#:	**Unknown**				
• Number of these trees that are considered **isolated**.	#:	**Unknown**				
Total amount of impact to forested areas as a result of the project	123 +/-	ac.				

STOP Stop if the project is located within the **NE**, **E**, or **S** Management Units.

GO Continue with form if the project is located within the **W** or **C** Management Units.

Are the impacted potential **roost trees** located within a forested area?	Y		N	
• If yes, what is the approximate size of the forested area in acres (include areas not impacted)?	ac.			
Are the impacted potential **roost trees** connected to a forest area via a tree line (row of 2 or more wide)?	Y		N	
• If yes, what is the size of the connected forested area?	ac.			
Is there a perennial water sources within 0.5 mile of the impacted potential **roost trees**?	Y		N	
Will the project remove all or a portion of a potential Indiana bat **travel corridor**?	Y		N	
Will the project remove more than 10% of the forest area it is within (or connected to)?	Y		N	

Definitions for **bold** words located in the ODOT Ecological Manual section 203.2.3.

Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR DAVID MUSTINE, DIRECTOR

Ohio Division of Wildlife
David B. Lane, Chief
2045 Morse Rd., Bldg. G
Columbus, OH 43229-6693
Phone: (614) 265-6300

July 7, 2011

Jason Earley
ASC Group, Inc.
800 Freeway Dr. North, Suite 101
Columbus, OH 43229

Dear Mr. Earley:

Per your request, I have e-mailed you a set of ArcView shape files for the SCI-823-0.00 Portsmouth Bypass (PID 19415) project, including a one mile radius, in Scioto County, and on the Minford and New Boston Quads. The files are projected in NAD83 Ohio State Plane South. The units are feet. This data will not be published or distributed beyond the scope of the project description on the data request form without prior written permission of the Biodiversity Database Program.

Our standard search covers the project area you indicated in your request plus a one mile radius. Every feature in the database is included in this search, so you may receive as many as five layers of data: "data" with rare species and significant natural features records, "ma" with managed areas boundaries, "sr" showing scenic rivers, "sites" for conservation sites, and "ib" for an extended Indiana Bat search beyond the standard one mile radius (and which is only provided upon your specific request). If you do not receive some of these layers it is because none of those features were found in the search performed for your project. Only the layers that are pertinent to your search results will be addressed further below.

Records included in the "data" layer may be for rare and endangered plants and animals, geologic features, high quality plant communities and animal assemblages. Fields included are scientific and common names, state and federal statuses, as well as managed area and date of the most recent observation. State and federal statuses are defined as: E = endangered, T = threatened, P = potentially threatened, SC = species of concern, SI = special interest, FE = federal endangered, FT = federal threatened and A=recently added to inventory, status not yet determined.

I have performed a search for Indiana Bat (*Myotis sodalis*, state endangered, federal endangered) capture sites within a five mile radius and hibernacula within a ten mile radius. If any records were found, this layer will be included and labeled "ib". If the layer is not included it means no records were found.

Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Please note that although we inventory all types of plant communities, we only maintain records on the highest quality areas.

Please contact me at 614-265-6818 if I can be of further assistance.

Sincerely,

Debbie Woischke, Ecological Analyst
Ohio Biodiversity Database Program

From: Tibbels, Andrea
To: Jason Earley
Subject: RE: Bald Eagle Location Request for ODOT Level 2 ESR
Date: Friday, July 29, 2011 4:37:19 PM

Jason,

The nearest bald eagle nest is 6.97 miles WSW of the intersection of Flower Ison Rd and Lucasville-Minford Rd. Thanks!

Andrea Tibbels
Wildlife Research Technician
Ohio Division of Wildlife-Crane Creek Research
13229 West State Route 2
Oak Harbor, Ohio 43449
419-898-0960 Ext. 25
419-898-4017 (Fax)
Andrea.Tibbels@dnr.state.oh.us
WWW.WildOhio.com

-----Original Message-----
From: Jason Earley [mailto:jearley@ascgroup.net]
Sent: Thursday, July 28, 2011 11:54 AM
To: Sherman, Dave; Tibbels, Andrea
Subject: Bald Eagle Location Request for ODOT Level 2 ESR

Andrea and Dave:

ASC Group is completing a Level 2 Ecological Survey for the proposed Portsmouth Bypass Project, in Scioto County. Per the ODOT Ecological Manual
we are required to provide the location information of the nearest known bald eagle nesting site(s). The proposed project footprint is provided on
the attached USGS map of the New Boston and Minford quadrangles to assist
you with our request. The northern terminus of the project is northwest of
Lucasville-Minford Road and the southern terminus of the project is located
just south of Shumway Hollow Road.

Thanks in advance, and please do not hesitate to contact me should you need
an additional information to process this request.

Thank you in advance.

Sincerely,

Jason M. Earley
Senior Environmental Specialist
ASC Group, Inc.
800 Freeway Drive North, Suite 101

Columbus, Ohio 43229
Work: (614)643-3205
Cell: (614)787-3454
jearley@ascgroup.net

Megan Michael
01/12/04 03:53 PM

To: Noel Alcala/Environmental/CEN/ODOT, Jennifer Townley/RdwySafetyMobility/CEN/ODOT, Kaye Humble/Planning/D09/ODOT, Greg Manson/Planning/D09/ODOT,
cc:
Subject: SCI-[redacted]-0.00 (PID19415) Portsmouth Bypass -- Timber Rattlesnake

823

All,

Attached below is a concurrence letter sent by this office to ODNR-DOW on November 26, 2003, and signed by DOW on December 18, 2003 stating that ODNR agrees that it is unlikely that the state endangered Timber Rattlesnake (*Crotalus horridus horridus*) is present within the survey area for this project. Please include, discuss, and appropriately reference this concurrence letter in the environmental document.

Fred Steck has been working on this project, but is on leave due to a foot operation. This is why this has been sent by me. He should be back to answer questions by the end of the month.

If you have any questions, please contact me.

Megan Michael, Environmental Specialist
ODOT-CO-OES Ecological Section
1980 West Broad Street, Floor 3
Columbus, Ohio 43223
(614) 644-7099/megan.michael@dot.state.oh.us

c. File

SCI-823-0.00 (19415) Timber Rattler concurrence from D

OHIO DEPARTMENT OF TRANSPORTATION
INTEROFFICE COMMUNICATION
Office of Environmental Services

DATE: November 26, 2003

TO: Steven A. Gray, Chief, Division of Wildlife, ODNR
Attention: Joe Mion

FROM: Timothy M. Hill, Administrator, Office of Environmental Services

SUBJECT: Timber Rattlesnake Survey Report

PROJECT: SCI-823-0.00 (PID 19415), Portsmouth Bypass

Enclosed for your review is a survey report for the timber rattlesnake (*Crotalus horridus*) prepared for the Portsmouth Bypass project in Scioto County. The survey was performed by herpetologist Doug Wynn from March 24 through September 27, 2003, along the alternative corridors for the project. He found no individuals of the species. While he did find potentially suitable habitat, he found that the proximity of humans has caused significant disturbance of the area. He also states that the proximity of humans suggests that if the species were present in the area, sightings would be common and often reported, which he did not find to be the case. It is his professional opinion that it is very unlikely that the species inhabits or utilizes the surveyed area. We are requesting your concurrence with that opinion.

The enclosed report will be included in the appendices of the Ecological Survey Report for the project. If you have any questions, please call Fred Steck, Environmental Supervisor, at 466-1937.

ODNR Concurrence

12-8-03
(Date)

TMH:WRC:FKS:fs
Enclosure

c: Noel Alcala - Jennifer Townley - Kaye Humble, District 9 - Susan Swartz, TranSystems Corp. - File - Reading File

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
4625 Morse Road, Suite 104
Columbus, Ohio 43230
(614) 416-8993 / FAX (614) 416-8994

Federally Listed Species by Ohio Counties
August 23, 2011

COUNTY	SPECIES
ADAMS	Indiana bat (E), running buffalo clover (E), fanshell (E), pink mucket pearly mussel (E), rayed bean (PE), sheepnose (PE), snuffbox (PE), timber rattlesnake (SC)
ALLEN	Indiana bat (E), rayed bean (PE), bald eagle (SC)
ASHLAND	Indiana bat (E), bald eagle (SC), eastern hellbender (SC)
ASHTABULA	Indiana bat (E), Kirtland's warbler (E), piping plover (E), clubshell (E), snuffbox (PE), eastern massasauga (C), bald eagle (SC)
ATHENS	Indiana bat (E), American burying beetle (E), fanshell (E), pink mucket pearly mussel (E), sheepnose (PE), snuffbox (PE), timber rattlesnake (SC)
AUGLAIZE	Indiana bat (E), rayed bean (PE)
BELMONT	Indiana bat (E), sheepnose (PE), snuffbox (PE), bald eagle (SC), eastern hellbender (SC)
BROWN	Indiana bat (E), running buffalo clover (E), fanshell (E), pink mucket pearly mussel (E), rayed bean (PE), sheepnose (PE), snuffbox (PE), bald eagle (SC)
BUTLER	Indiana bat (E), rayed bean (PE), bald eagle (SC)
CARROLL	Indiana bat (E)
CHAMPAIGN	Indiana bat (E), rayed bean (PE), eastern massasauga (C)
CLARK	Indiana bat (E), rayed bean (PE), eastern prairie fringed orchid (T), eastern massasauga (C)
CLERMONT	Indiana bat (E), running buffalo clover (E), fanshell (E), pink mucket pearly mussel (E), rayed bean (PE), sheepnose (PE), snuffbox (PE), bald eagle (SC)
CLINTON	Indiana bat (E), rayed bean (PE), eastern massasauga (C)
COLUMBIANA	Indiana bat (E), sheepnose (PE), snuffbox (PE), eastern massasauga (C), bald eagle (SC), eastern hellbender (SC)
COSHOCTON	Indiana bat (E), clubshell (E), fanshell (E), purple cat's paw pearly mussel (E), rayed bean (PE), sheepnose (PE), snuffbox (PE), rabbitsfoot (C), bald eagle (SC), eastern hellbender (SC)
CRAWFORD	Indiana bat (E), rayed bean (PE), eastern massasauga (C), bald eagle (SC)
CUYAHOGA	Indiana bat (E), Kirtland's warbler (E), piping plover (E), bald eagle (SC)

DARKE	Indiana bat (E), rayed bean (PE)
DEFIANCE	Indiana bat (E), clubshell (E), northern riffleshell (E), white cat's paw pearly mussel (E), rayed bean (PE), copperbelly water snake (T), bald eagle (SC)
DELAWARE	Indiana bat (E), clubshell (E), rayed bean (PE), snuffbox (PE), bald eagle (SC)
ERIE	Indiana bat (E), Kirtland's warbler (E), piping plover (E/CH), Lakeside daisy (T), eastern massasauga (C), bald eagle (SC), Lake Erie watersnake (SC)
FAIRFIELD	Indiana bat (E), clubshell (E), rayed bean (PE), eastern massasauga (C), bald eagle (SC)
FAYETTE	Indiana bat (E), rayed bean (PE), eastern massasauga (C)
FRANKLIN	Indiana bat (E), Scioto madtom (E), clubshell (E), northern riffleshell (E), rayed bean (PE), snuffbox (PE), rabbitsfoot (C), bald eagle (SC)
FULTON	Indiana bat (E), rayed bean (PE)
GALLIA	Indiana bat (E), fanshell (E), pink mucket pearly mussel (E), sheepnose (PE), snuffbox (PE), timber rattlesnake (SC)
GEAUGA	Indiana bat (E), bald eagle (SC)
GREENE	Indiana bat (E), clubshell (E), rayed bean (PE), snuffbox (PE), eastern massasauga (C)
GUERNSEY	Indiana bat (E), American burying beetle (E), bald eagle (SC)
HAMILTON	Indiana bat (E), running buffalo clover (E), fanshell (E), pink mucket pearly mussel (E), rayed bean (PE), sheepnose (PE), snuffbox (PE), bald eagle (SC)
HANCOCK	Indiana bat (E), clubshell (E), rayed bean (PE), bald eagle (SC)
HARDIN	Indiana bat (E), clubshell (E), rayed bean (PE), copperbelly water snake (T), eastern massasauga (C), bald eagle (SC)
HARRISON	Indiana bat (E), bald eagle (SC)
HENRY	Indiana bat (E), rayed bean (PE), bald eagle (SC)
HIGHLAND	Indiana bat (E), rayed bean (PE), bald eagle (SC), timber rattlesnake (SC)
HOCKING	Indiana bat (E), American burying beetle (E), running buffalo clover (E), northern monkshood (T), small whorled pogonia (T), timber rattlesnake (SC), bald eagle (SC)
HOLMES	Indiana bat (E), eastern prairie fringed orchid (T), bald eagle (SC), eastern hellbender (SC)
HURON	Indiana bat (E), eastern massasauga (C), bald eagle (SC)
JACKSON	Indiana bat (E), timber rattlesnake (SC)
JEFFERSON	Indiana bat (E), sheepnose (PE), snuffbox (PE), bald eagle (SC), eastern hellbender (SC)
KNOX	Indiana bat (E), bald eagle (SC), eastern hellbender (SC)
LAKE	Indiana bat (E), Kirtland's warbler (E), piping plover (E/CH), snuffbox (PE), bald eagle (SC)

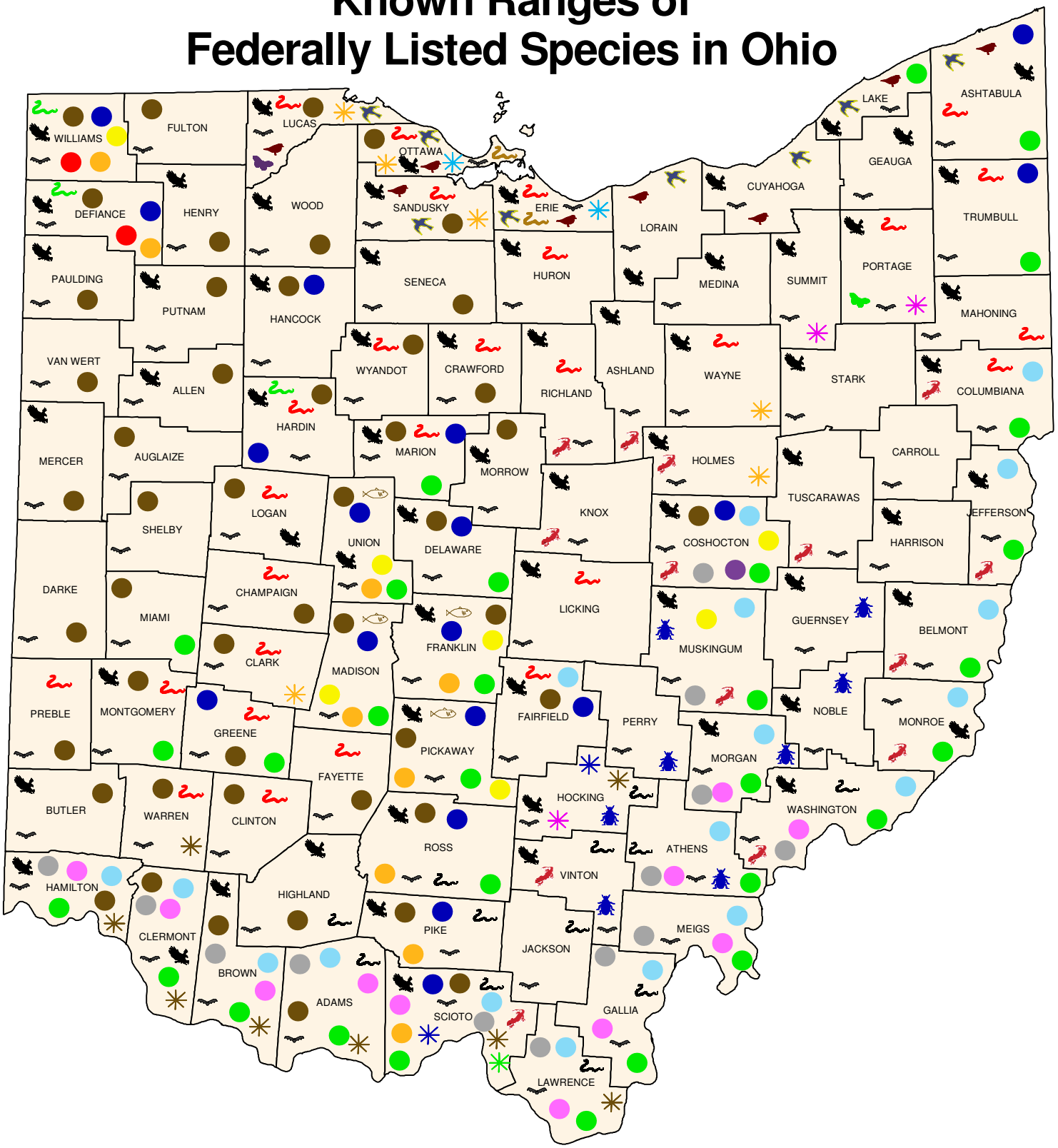
LAWRENCE	Indiana bat (E), running buffalo clover (E), fanshell (E), pink mucket pearly mussel (E), sheepnose (PE), snuffbox (PE), timber rattlesnake (SC)
LICKING	Indiana bat (E), eastern massasauga (C), bald eagle (SC)
LOGAN	Indiana bat (E), rayed bean (PE), eastern massasauga (C), bald eagle (SC)
LORAIN	Indiana bat (E), Kirtland's warbler (E), piping plover (E), bald eagle (SC)
LUCAS	Indiana bat (E), Karner blue butterfly (E), Kirtland's warbler (E), piping plover (E), rayed bean (PE), eastern prairie fringed orchid (T), eastern massasauga (C), bald eagle (SC)
MADISON	Indiana bat (E), Scioto madtom (E), clubshell (E), northern riffleshell (E), rayed bean (PE), snuffbox (PE), rabbitsfoot (C)
MAHONING	Indiana bat (E), eastern massasauga (C), bald eagle (SC)
MARION	Indiana bat (E), clubshell (E), rayed bean (PE), snuffbox (PE), eastern massasauga (C), bald eagle (SC)
MEDINA	Indiana bat (E), bald eagle (SC)
MEIGS	Indiana bat (E), fanshell (E), pink mucket pearly mussel (E), sheepnose (PE), snuffbox (PE)
MERCER	Indiana bat (E), rayed bean (PE), bald eagle (SC)
MIAMI	Indiana bat (E), rayed bean (PE), snuffbox (PE)
MONROE	Indiana bat (E), sheepnose (PE), snuffbox (PE), bald eagle (SC), eastern hellbender (SC)
MONTGOMERY	Indiana bat (E), rayed bean (PE), snuffbox (PE), eastern massasauga (C), bald eagle (SC)
MORGAN	Indiana bat (E), American burying beetle (E), fanshell (E), pink mucket pearly mussel (E), sheepnose (PE), snuffbox (PE), bald eagle (SC)
MORROW	Indiana bat (E), rayed bean (PE), bald eagle (SC)
MUSKINGUM	Indiana bat (E), American burying beetle (E), fanshell (E), sheepnose (PE), snuffbox (PE), rabbitsfoot (C), bald eagle (SC), eastern hellbender (SC)
NOBLE	Indiana bat (E), American burying beetle (E), bald eagle (SC)
OTTAWA	Indiana bat (E), Kirtland's warbler (E), piping plover (E), rayed bean (PE), Lakeside daisy (T), eastern prairie fringed orchid (T), eastern massasauga (C), bald eagle (SC), Lake Erie watersnake (SC)
PAULDING	Indiana bat (E), rayed bean (PE), bald eagle (SC)
PERRY	Indiana bat (E), American burying beetle (E)
PICKAWAY	Indiana bat (E), Scioto madtom (E), clubshell (E), northern riffleshell (E), rayed bean (PE), snuffbox (PE), rabbitsfoot (C), bald eagle (SC)
PIKE	Indiana bat (E), clubshell (E), northern riffleshell (E), rayed bean (PE), bald eagle (SC), timber rattlesnake (SC)
PORTAGE	Indiana bat (E), Mitchell's satyr (E), northern monkshood (T), eastern massasauga (C), bald eagle (SC)

PREBLE	Indiana bat (E), rayed bean (PE), eastern massasauga (C)
PUTNAM	Indiana bat (E), rayed bean (PE), bald eagle (SC)
RICHLAND	Indiana bat (E), eastern massasauga (C), bald eagle (SC), eastern hellbender (SC)
ROSS	Indiana bat (E), clubshell (E), northern riffleshell (E), rayed bean (PE), snuffbox (PE), bald eagle (SC), eastern hellbender (SC), timber rattlesnake (SC)
SANDUSKY	Indiana bat (E), Kirtland's warbler (E), piping plover (E), rayed bean (PE), eastern prairie fringed orchid (T), eastern massasauga (C), bald eagle (SC)
SCIOTO	Indiana bat (E), running buffalo clover (E), clubshell (E), fanshell (E), northern riffleshell (E), pink mucket pearly mussel (E), rayed bean (PE), sheepnose (PE), snuffbox (PE), small whorled pogonia (T), Virginia spiraea (T), bald eagle (SC), eastern hellbender (SC) timber rattlesnake (SC)
SENECA	Indiana bat (E), rayed bean (PE), bald eagle (SC)
SHELBY	Indiana bat (E), rayed bean (PE)
STARK	Indiana bat (E), bald eagle (SC)
SUMMIT	Indiana bat (E), northern monkshood (T), bald eagle (SC)
TRUMBULL	Indiana bat (E), clubshell (E), snuffbox (PE), eastern massasauga (C), bald eagle (SC)
TUSCARAWAS	Indiana bat (E), bald eagle (SC), eastern hellbender (SC)
UNION	Indiana bat (E), Scioto madtom (E), clubshell (E), northern riffleshell (E), rayed bean (PE), snuffbox (PE), rabbitsfoot (C), bald eagle (SC)
VAN WERT	Indiana bat (E), rayed bean (PE)
VINTON	Indiana bat (E), American burying beetle (E), bald eagle (SC), eastern hellbender (SC), timber rattlesnake (SC)
WARREN	Indiana bat (E), running buffalo clover (E), rayed bean (PE), eastern massasauga (C)
WASHINGTON	Indiana bat (E), fanshell (E), pink mucket pearly mussel (E), sheepnose (PE), snuffbox (PE), bald eagle (SC), eastern hellbender (SC), timber rattlesnake (SC)
WAYNE	Indiana bat (E), eastern prairie fringed orchid (T), eastern massasauga (C), bald eagle (SC)
WILLIAMS	Indiana bat (E), clubshell (E), northern riffleshell (E), white cat's paw pearly mussel (E), rayed bean (PE), copperbelly water snake (T), rabbitsfoot (C), bald eagle (SC)
WOOD	Indiana bat (E), rayed bean (PE), bald eagle (SC)
WYANDOT	Indiana bat (E), rayed bean (PE), eastern massasauga (C), bald eagle (SC)

IMPORTANT NOTE: This list reflects data available as of August 23, 2011, and will change as new data become available. For this reason, searches for listed species should not necessarily be limited to the counties noted above. Any decisions in that regard should be made only after calling the USFWS (614/416-8993) for guidance.

E = Endangered C = Candidate
PE = Proposed Endangered SC = Species of Concern
T = Threatened CH = Critical Habitat

Known Ranges of Federally Listed Species in Ohio



ENDANGERED

- Indiana Bat
- Kirtland's Warbler
- Piping Plover
- Scioto Madtom
- Karner Blue Butterfly
- Mitchell's Satyr
- American Burying Beetle
- Running Buffalo Clover
- Clubshell Mussel
- Fanshell Mussel
- Northern Riffleshell Mussel
- Pink Mucket Pearly Mussel
- Purple Cat's Paw Pearly Mussel
- White Cat's Paw Pearly Mussel

THREATENED

- Copperbelly Watersnake
- Eastern Prairie Fringed Orchid
- Lakeside Daisy
- Northern Monkshood
- Small Whorled Pogonia
- Virginia Spiraea

PROPOSED ENDANGERED

- Rayed Bean Mussel
- Sheepnose Mussel
- Snuffbox Mussel

CANDIDATE

- Eastern Massasauga Rattlesnake
- Rabbitsfoot Mussel

SPECIES OF CONCERN

- Timber Rattlesnake
- Bald Eagle
- Eastern Hellbender
- Lake Erie Watersnake

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ACONITUM UNCINATUM L.
Southern Monkshood

FAMILY: Ranunculaceae

HABIT: Herbaceous perennial from a tuberous-thickened root, 0.2-1 m.; flowering late August-September.

SIMILAR SPECIES: Very similar to *A. noveboracense*. The rachis of the inflorescence in *A. uncinatum* is glabrous to sparsely pilose, while that of *A. noveboracense* is hirsute. *A. uncinatum* also blooms slightly later than *A. noveboracense*.

TOTAL RANGE: Sw. PA to s. IN, s. to n. GA, w. SC, c. TN, and n. AL.

STATE RANGE (as of 2006): Post-1980 records from Scioto County.

HABITAT: In deep shade of a cool, moist sandstone rock shelter. In other parts of its range, it grows in a variety of mesic woodland situations.

HAZARDS: Drying of habitat by removal of forest canopy; soil compaction.

RECOVERY POTENTIAL: Probably very poor; seed and transplant experiments with the related *A. noveboracense* have not produced positive results.

INVENTORY GUIDELINES: Note presence of tubers and root connectives; avoid over-collecting.

COMMENTS: When not in bloom, this species may be easily overlooked. However, it seems to be extremely rare in Ohio owing to the limited availability of the habitat. It should be sought in suitable habitats throughout unglaciated Ohio.

Hardin (1964) splits *A. uncinatum* into two subspecies. If this concept is accepted, the Ohio material conforms to the typical subspecies.

SELECTED REFERENCES:

Brink, D.E. 1982. Tuberous *Aconitum* (Ranunculaceae) of the continental United States: morphological variation, taxonomy, and disjunction. Bull. Torr. Bot. Club 109: 12-23.

Cole, C.T. and M.A. Kuchenreuther. 2001 Molecular markers reveal little genetic differentiation among *Aconitum Noveboracense* and and *A. Columbianum* (Ranunculaceae) populations. American Journal of Botany 88(2): 337-347.

Cusick, A.W. 1983. *Aconitum uncinatum* L. (Ranunculaceae) discovered in Ohio. Castanea 48: 209-211.

Jensen, H.W. 1950. Meiosis in an unusual form of *Aconitum uncinatum* L. Am. Midl. Nat. 84: 17-22.

Hardin, J.W. 1964. Variation in *Aconitum* of eastern United States. Brittonia 16: 80-94.

Keener, C.S. 1976. Studies in the Ranunculaceae of the southeastern United States. IV. Genera with zygomorphic flowers. Castanea 41: 12-20.

Longacre, D.J. 1942. Somatic chromosomes of *Aconitum noveboracense* and *A. uncinatum*. Bull. Torr. Bot. Club 69: 235-239.

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Created: 11/1983 Allison W. Cusick

CASTANEA DENTATA (Marsh.) Borkh.
American Chestnut

FAMILY: Fagaceae

HABIT: Large tree to 35 m; flowers June-July, fruits Sept-Oct.

SIMILAR SPECIES: This species may be mistaken for the often planted Chinese chestnut (*C. mollissima*) which has leaves which are tomentose on the underside. The leaves of young sprouts of *C. dentata* may also be confused with those of beech *F. grandifolia*). However, chestnut leaves have longer teeth and veins that are more glabrous.

TOTAL RANGE: S. ME to se. MI, s. to DE, KY and IL and s. in the mountains to AL.

STATE RANGE (as of 2008; fruiting trees only): There are post-1980 records from Ashtabula, Columbiana, Cuyahoga, Erie, Hocking, Huron, Jefferson, Knox, Lake, Lawrence, Lorain, Lucas, Mahoning, Medina, Perry, Pike, Portage, Richland, Scioto, Stark, Summit, and Vinton Counties. There are pre-1980 records from Adams, Ashland, Athens, Belmont, Carroll, Coshocton, Fairfield, Gallia, Geauga, Guernsey, Hamilton, Henry, Highland, Holmes, Jackson, Licking, Monroe, Montgomery, Pickaway, Trumbull, Washington, and Wayne. Braun (1961) reports it from Clermont, Delaware, Franklin, Harrison, Morrow, Muskingum, Tuscarawas, and Wood counties.

HABITAT: Mostly acid soils in rich mesic sites, also on dry ridges and rocky slopes.

HAZARDS: The chestnut blight could lead to the eventual extinction of the species if young re-sprouted trees continue to die before they can reproduce.

RECOVERY POTENTIAL: Not good unless resistant trees can be bred or some form of biological control of the fungus can be found.

INVENTORY GUIDELINES: Collect mature flowers or fruit if present.

COMMENTS: Chestnut was formerly a dominant species of the Oak-Chestnut Forest region, especially throughout the Appalachian Highlands and Interior Low Plateau (Braun 1961). The species was decimated by the fungus *Endothia parasitica* that was accidentally introduced into the United States in 1904. This fungus killed nearly every adult chestnut tree throughout its range. However, this species exhibits a remarkable ability to re-sprout. Numerous sprouts occur at the base of dead stumps. However, the fungus also affects these sprouts after they attain a certain threshold size.

SELECTED REFERENCES:

Barnes, B.V. and W.H. Wagner. 1981. Michigan Trees. A guide to the trees of Michigan and the Great Lakes region. Univ. of Mich. Press, Ann Arbor. 383 pp.

Braun, E.L. 1961. The woody plants of Ohio. The Ohio State Univ. Press, Columbus OH. 362 pp.

Brewer, L.G. 1982. The present status and future prospect for the American Chestnut in Michigan. Mich. Bot. 21: 117-128.

Gleason, H.A., and A. Cronquist. 1991. Manual of vascular plants of northeastern United States and adjacent Canada. New York Botanical Garden, Bronx, New York. 910 pp.

Voss, E.G. 1985. Michigan Flora, Part II. Dicots (Saururaceae-Cornaceae). Cranbrook Inst. Sci. Bull. 59, Bloomfield Hills, MI. 724 pp.

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Created: 4/1993 Greg Schneider

VIOLA PRIMULIFOLIA L.
Primrose-leaved Violet

FAMILY: Violaceae

HABIT: Stemless perennial herb to 1.7 dm.; flowering early May-early June; fruiting June-August.

SIMILAR SPECIES: *Viola primulifolia* is very similar and closely related to *V. lanceolata. V. primulifolia* can generally be distinguished by its usually ovate leaf blades. The leaf blades of *V. lanceolata* are lanceolate to linear. However, leaf shape in *V. primulifolia* exhibits considerable variation, and thus technical characters are used to distinguish these species. Fernald (1949) states that after the spring flowering season, *V. primulifolia* is easily distinguished by its habit of sending out prostrate stolons that are essentially leafless and sterile. The prostrate stolons of *V. lanceolata* have well-developed leaves and bear many cleistogamous flowers.

TOTAL RANGE: FL to e. TX, n. to ME, PA, OH, MI, IN, and OK.

STATE RANGE: There are post-1980 records from Ashtabula, Jackson and Portage counties. There is a pre-1980 record from Scioto County.

HABITAT: In moist, open situations, usually on sandy soil: meadows, edges of ponds, streams, marshes, and swamps.

HAZARDS: Overshading by woody species as a result of succession; overdrying of the habitat.

RECOVERY POTENTIAL: Unknown, but possibly good due to its variety of habitat.

INVENTORY GUIDELINES: Mature flowering or fruiting material is needed for positive identification.

COMMENTS: *V. primulifolia* may be more frequent in Ohio than current records indicate. It could easily be overlooked due to its small size and similarity to *V. lanceolata*. It should be sought in suitable habitats throughout the state.

SELECTED REFERENCES:

Cooperrider, T.S. 1995. The Dicotyledoneae of Ohio. Part 2. Linaceae through Campanulaceae. Ohio State Univ. Press, Columbus, OH. 656 pp.

Fernald, M.L. 1949. Rhizome characters in and minor forms of *Viola*. Rhodora 51: 51-57.

Miller, L.D. 1976. The Violaceae of Ohio. Unpublished M.S. thesis. Kent State University, Kent, OH. 203 p.

Russell, N.H. 1965. Violets (*Viola*) of central and eastern United States: An introductory survey. Sida 2: 1-113

Soper, J.H. and M.L. Heimberger. 1982. Shrubs of Ontario. Royal Ontario Museum, Toronto, Canada. 495 p.

Terri, J.A. 1968. Developmental variability of *Cornus canadensis* in northern New England. Rhodora 70: 161-175.

Wagner, W.H., Jr. 1975. A bunchberry, "Last Rose of Summer." Mich. Bot. 14: 201-202.

Ohio Department of Natural Resources
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Created: 11/1983 Barbara K. Andreas