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verdantas

March 13, 2025

Mr. John Ducatman, RA. RDL Architects 16102 Chagrin Boulevard Shaker Heights, Ohio 44120 johnd@rdlarchitects.com

RE: Laurel Lake Wetland Delineation - Pond 1

Dear Mr. Ducatman:

Verdantas, LLC (formerly CT Consultants, Inc.) prepared the Wetland Delineation Report for the Laurel Lake, Hudson, Ohio property in August 2022. We have been requested to provide clarification around Pond-1 jurisdiction and the type of surface water feature this is considered.

Pond-1 as labeled on the attached Water Resource Map for Laurel Lake, is considered a tributary impoundment under (a)(3) of the Waters of the United States (WOTUS) Regulatory Ruling. Pond-1 does not contain wetland vegetation and is not considered a wetland by definition. This feature is an open water impoundment that extends upstream as a part of Lake Forest on the north side of Boston Mills Road. This feature is an impoundment of an unnamed tributary to Brandywine Creek, that drains to the Cuyahoga River and ultimately into Lake Erie.

I hope the preceding information provides the necessary clarification.

Respectfully,

Carrie Ricker
Project Manager

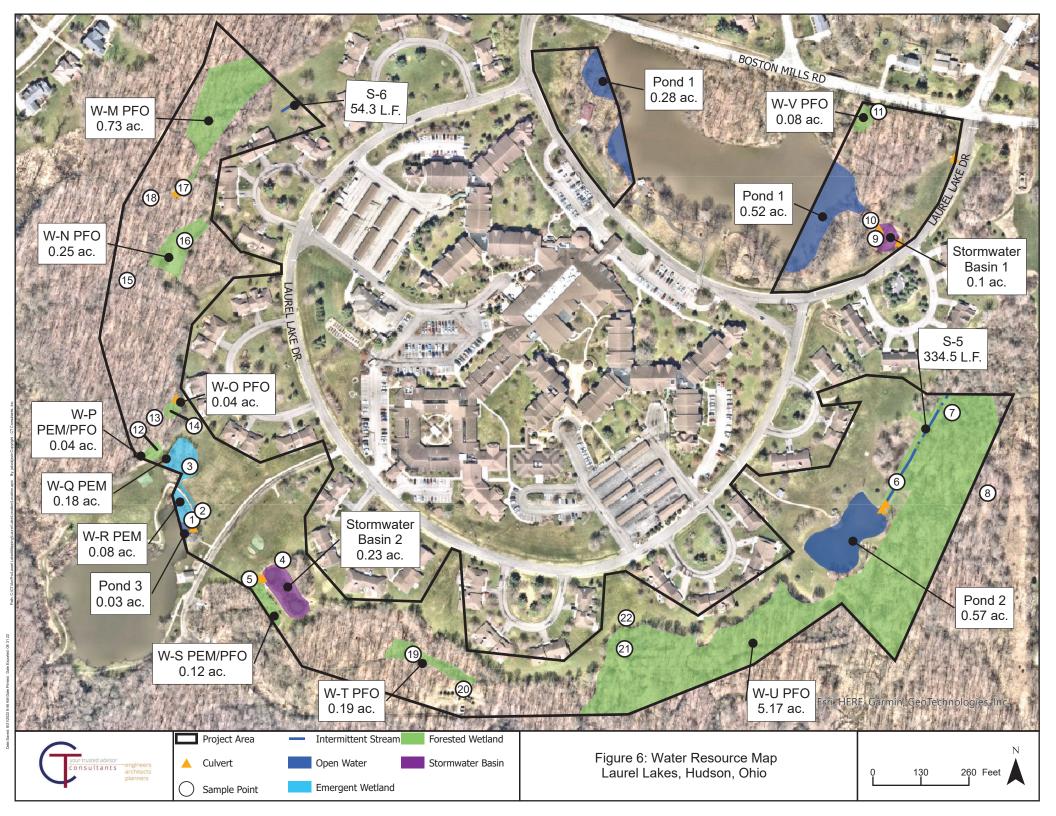
cricker@verdantas.com

(440) 530-2208

CC:

Lene Hill, PE, LEEP AP; LHill@verdantas.com John Crawford, PS; JCrawford@verdantas.com Attachment A







## Wetland Delineation

# Laurel Lake, Hudson, Ohio

PREPARED FOR

**RDL** Architects

Address 16102 Chagrin Boulevard Shaker Heights, Ohio 44120

ISSUED: 08.26.2022

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#### 1.0 INTRODUCTION

As requested by RDL Architects a wetland delineation has been performed by CT Consultants, Inc. (CT) on the Laurel Lake property located in the city of Hudson, Summit County, Ohio in June and August of 2022. There was a previous Wetland Delineation performed within the same parcel on January 31, 2020 and this report is a continuation of the previous 2020 Wetland Delineation Report. The purpose of this wetland delineation is to determine the presence, extent, and quality of wetlands, streams, and other surface water resources that may be subject to regulation under Section 404 and 401 of the United States Clean Water Act. The wetland delineation was performed in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual and the 2012 Regional Supplement to the Corps of Engineers Delineating manual: Northcentral and Northeast Region (January 2012, Version 2.0). This report summarizes the results of our wetland investigation.

A review of the available data has been completed to evaluate potential conditions of the site. A walk through of the property revealed that there were wetland areas on the property. Points were plotted on the property to best characterize the wetland and non-wetland areas. Field investigations were completed to determine the wetland boundaries. Delineated wetland boundaries have been marked on the property using neon pink wetland flagging. These boundaries were plotted on a map of the site and the areas were digitally calculated. Thus, it was determined that 7.21 acres of wetlands, 388.8 linear feet of stream, and 1.40 acres of open water are present on the study site.

#### 1.1 SITE LOCATION

The study site is approximately 28 acres in size and is located at Laurel Lake Drive within the city of Hudson, Summit County, Ohio. The subject property is contained within PPN: 3203045. The site is divided into three (3) separate study areas.



Boundaries of each study area are as indicated on the attached maps. See Resource Maps (Appendix A) and Water Resource Maps (Appendix B) for details.



#### 2.0 METHODOLOGY

On August 17, 1991 the U.S. Army Corps of Engineers was directed under the 1991 appropriation bill to utilize the 1987 Corps of Engineers Wetlands Delineation Manual. The Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0) was issued in January 2012 and is to be used in conjunction with the 1987 Manual. This Supplement is applicable to all or portions of Connecticut, Illinois, Indiana, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, and Wisconsin.

An experienced wetland scientist has reviewed all available resources of information including historic aerial photographs and topographic maps, as well as technical criteria and field indicators to assess the site. Following are the techniques utilized for making a wetland determination and delineation.

#### 2.1 HYDROPHYTIC VEGETATION

Methods outlined in these manuals specify that hydrophytic vegetation decisions are based on the wetland indicator status of species that make up the plant community. The frequency and duration of soil inundation or soil saturation exerts a controlling influence on the species of vegetation growing in an area. These plant species are placed into five categories and reflect the occurrence of these species in wetland or non-wetland areas. These categories, called wetland probability indicators, were appended to plant life by a National Interagency Panel. These indicators are as follows:

- Obligate Wetland (OBL) greater than 99% probability of occurrence in wetlands.
- Facultative Wetland (FACW) 67-99% probability of occurrence in wetlands.
- Facultative (FAC) 34-66% probability of occurrence in wetlands.
- Facultative Upland (FACU) 1-32% probability of occurrence in wetlands.



Obligate Upland (UPL) - less than 1% probability of occurrence in wetlands.

Following this methodology, representative observation points, or sample points, are placed in each plant community type on the project site. Vegetative sampling is done using visual estimates of percent aerial coverage of the dominant species.

To determine if hydrophytic vegetation was present, the percentage of plant species coverage was assessed, and a dominance test was conducted. Percentage of plant species dominance is the accepted method of quantification. If greater than 50 percent of the dominant species in each vegetative layer is FAC, FACW or OBL, then hydrophytic vegetation is present. If the percentage is lower than 50 percent, prevalence index and morphological adaptations are subsequent methods in determining the presence of hydrophytic vegetation.

#### 2.2 HYDRIC SOIL

To be considered a wetland, the presence of hydric soils must be confirmed. Hydric soils are those that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper horizons. This anaerobic condition favors the growth of hydrophytic vegetation. The colors of various soil components are often the most diagnostic indicators of hydric soils. Colors of these components are strongly influenced by the frequency and duration of soil saturation, which leads to reducing soil conditions. Specifically, gleyed (gray colored) soils develop when anaerobic soil conditions produce a heavily reducing environment. Mineral hydric soils that are saturated for substantial periods of the growing season (but not long enough to produce gleyed soils) will either have bright mottles and a low matrix chroma or will lack mottles but have a low matrix chroma (USACE, 1987).

Soil samples were collected, at locations indicated on the Wetland Delineation map (Appendix B), to a depth of 20 inches from the soil surface. Soil samples were visually



compared to *Munsell Soil Color Charts* (Munsell, 2000) to document color and assess the presence of hydric soil indicators.

#### 2.3 WETLAND HYDROLOGY

It is essential to establish that the area under investigation is temporarily or periodically inundated with water or has saturated soils during the growing season. The inundation of water has an overriding influence on the plant life so that there is a dominance of hydrophytic vegetation. Also, the inundation of water results in the formation of hydric soils due to the anaerobic and reducing conditions. While wetland hydrology is the overriding factor of wetland formation, it may also be the most difficult to identify. Wetland hydrology is assumed to be present if one or more primary hydrology indicators or two or more secondary indicators are observed. Refer to the data sheets (Appendix D) for a list of these indicators.

#### 3.0 DISCUSSION

CT Consultants has initially reviewed the available data which might provide some insight into existing conditions within the property.

#### 3.1 AGENCY RESOURCE INFORMATION

#### USDA SOIL SURVEY

The US Department of Agriculture *Web Soil Survey* (Appendix A) indicated the presence of the following soil types in declining order that are present on the site:



1. Sb	(23.1%)	Sebring silt loam	0 to 2 percent slopes
2. CcB	(25.7%)	Caneadea silt loam	2 to 6 percent slopes
3. FcB	(13.3%)	Fitchville silt loam	2 to 6 percent slopes
4. GbC2	(4.3%)	Geeburg silt loam	6 to 12 percent slopes
5. BhB	(15.4%)	Bogart-Haskins loams	2 to 6 percent slopes
6. Le	(1.8%)	Lobdell silt loam	
7. CoC2	(0.2%)	Chili gravelly loam	6 to 12 percent slopes
8. Ca	(16%)	Canadice silty clay loam	
9. W	(0.2%)	Water	

Of the above listed soil series, the Sebring (Sb) silt loam and Canadice (Ca) silty clay loam is listed as "hydric" within the Hydric Soils of the United States (1987). Additionally, the Fitchville (FcB) silt loam has the potential for hydric inclusions in drainage ways and depressions.

#### NATIONAL WETLAND INVENTORY

An examination of the US Fish and Wildlife National Wetland Inventory (NWI) Map, (Appendix A) indicates a previously mapped palustrine scrub/shrub broad-leaved deciduous emergent persistent seasonally flooded freshwater (PSS1/EMC1) wetland and four (4) palustrine unconsolidated bottom intermittently exposed (PUBG) freshwater ponds within the study site. These mapped areas roughly correspond to the currently mapped W-Q, W-R, W-S, Pond 1, Pond 2, Pond 3 and Stormwater Basin 2 currently mapped on the Water Resource Map found in Appendix B. The NWI map has been compiled using aerial photography in conjunction with collateral data sources and fieldwork. It should be noted that, however useful it may be as a preliminary wetland resource, the size and shape of wetlands could vary greatly between the available data sources and the on-site observed conditions. NWI maps are not to be construed as the final authority for wetlands existence.



#### 3.2 SITE CHARACTERISTICS

This property is located within the glaciated Allegheny Plateau Region of northeastern Ohio. The surficial geology of the property was formed by the deposition of silty glacial till or loamy material over silty glacial till. The soils on the property are of the Sebring association and are nearly level, poorly drained soils on stream terraces throughout the county. These soils formed in sediment high in silt content.

The property consists primarily of forested and emergent plant communities with mowed lawn areas. There are three (3) freshwater ponds. Two (2) of the ponds are connected to adjacent streams that flow off site. Within the northern section, Pond 1 is connected to Lake Forest and drains north to an unnamed tributary to Brandywine Creek. Within the western area, Pond 3 drains south into an unnamed tributary to Mud Brook. The central section is made up of a stream and associated wetland system draining south to another unnamed tributary to Mud Brook. Surrounding land use is primarily residential and forested.

#### 3.3 FUTURE SITE USAGE

The site is proposed to construct additional retirement homes, parking lots, and sidewalks within the Laurel Lake Retirement Community. However, no plans have been finalized at this time.

#### 4.0 WETLAND DELINEATION RESULTS

It was determined that 7.21 acres of wetlands, 388.8 linear feet of stream, and 1.4 acres of open water are present on the study site. It is the opinion of CT Consultants that wetlands and streams present are considered federally jurisdictional 'Waters of the United States' (WOTUS) with the exception of the two (2) stormwater basins containing emergent wetland vegetation.



#### **4.1 EXTENT OF WATER RESOURCES**

The wetland boundaries were plotted on a map of the site and the areas were digitally calculated. See the Delineation Map in Appendix B. The following tables show a breakdown of the wetland and stream areas.

Table 1. Extent of Water Resources- Wetlands

Wetland Label	Area (ac.)	Wetland Type <sup>1</sup>	Jurisdictional Status <sup>2</sup>	ORAM Category	Latitude	Longitude
W-M	0.73	PFO	Jurisdictional	Mod 2	41.245447°	-81.474375°
W-N	0.25	PFO	Jurisdictional	Mod 2	41.244436°	-81.474780°
W-O	0.04	PFO	Jurisdictional	Mod 2	41.243254°	-81.474823°
W-P	0.04	PEM/PFO	Jurisdictional	Mod 2	41.242930°	-81.475017°
W-Q	0.18	PEM	Jurisdictional	Mod 2	41.242884°	-81.474744°
W-R	0.08	PEM	Jurisdictional	Mod 2	41.242507°	-81.474727°
W-S	0.12	PEM/PFO	Jurisdictional	Mod 2	41.241827°	-81.473936°
W-T	0.19	PFO	Jurisdictional	Mod 2	41.241437°	-81.472469°
W-U	5.17	PFO	Jurisdictional	2	41.241767°	-81.468066°
W-V	0.08	PFO	Jurisdictional	Mod 2	41.245335°	-81.467970°
Stormwater Basin 1	0.10	PEM	Non- Jurisdictional	N/A	41.244455°	-81.467770°
Stormwater Basin 2	0.23	PEM	Non- Jurisdictional	N/A	41.241878°	-81.473719°
TOTAL	7.21					

<sup>&</sup>lt;sup>1</sup>PFO- Palustrine Forested, PEM- Palustrine Emergent



<sup>&</sup>lt;sup>2</sup>Preliminary jurisdictional status based on the professional opinion of CT Consultants; subject to review by USACE.

Table 2. Extent of Water Resources- Streams

Stream Label	Length On-site (LF)	Flow Regime <sup>1</sup>	Drainage Area (sq-mi)	Jurisdictional Status <sup>2</sup>	HHEI Score	Latitude	Longitude
S-5	334.5	I	0.12	Jurisdictional	24	41.242955°	- 81.474631°
S-6	54.3	I	<0.10	Jurisdictional	19	41.245472°	- 81.473573°
TOTAL	388.8						

<sup>&</sup>lt;sup>1</sup>I-intermittent

Table 3. Extent of Water Resources- Open Water

Pond Label	Area on-site (Acres)	Jurisdictional Status <sup>1</sup>	Relation to Stream <sup>2</sup>	Latitude	Longitude
Pond 1	0.80	Jurisdictional	RPW	41.244744°	-81.468428°
Pond 2	0.57	Jurisdictional	RPW	41.242223°	-81.468225°
Pond 3	0.03	Jurisdictional	RPW	41.242025°	-81.473890°
TOTAL	1.40				

<sup>&</sup>lt;sup>1</sup>Preliminary jurisdictional status based on the professional opinion of CT Consultants; subject to review by USACE



<sup>&</sup>lt;sup>2</sup>Preliminary jurisdictional status based on the professional opinion of CT Consultants; subject to review by USACE

<sup>&</sup>lt;sup>2</sup>RPW - Relatively Permanent Water

#### 4.2 LAND COVER/PLANT COMMUNITIES

Plant communities and/or land covers were determined by characterizing the dominant vegetative strata present within areas that share similar topographical relief, soil types and hydrology.

#### 1. Mixed Hardwood, Hydrophytic:

Wetlands present observed the following species: Red Maple (*Acer rubrum*), Sugar Maple (*Acer saccharinum*), Swamp White Oak (*Quercus bicolor*), Green Ash (*Fraxinus pennsylvanica*), Pin Oak (*Quercus palustris*), American Elm (*Ulmus americana*), Jewelweed (*Impatiens capensis*), Common Rush (*Juncus effusus*), Sedges (*Carex spp.*), and Creeping Jenny (*Lysimachia nummularia*).

#### 2. Mixed Hardwood, Mesophytic:

Species include: Red Maple (*Acer rubrum*), American Elm (*Ulmus americana*), Green Ash (*Fraxinus pennsylvanica*), Multifloral Rose (*Rosa multiflora*), Sedges (*Carex spp.*), and Posion Ivy (*Toxicodendron radicans*).

#### 3. Emergent, Hydrophytic:

Species include: Reed Canary grass (*Phalaris arundinacea*), Sedge species (*Carex spp.*), Narrow-leaf Cattail (*Typha angustifolia*), Common reed (*Phragmites australis*), Creeping Jenny (*Lysimachia nummularia*), and Jewelweed (*Onoclea sensibilis*).

#### 4. Mowed Lawn Mesophytic:

This area contains mowed herbaceous vegetation including: Grass species (*Poa spp.*), Field Clover (*Trifolium capestre*), and Dandelion (*Taraxacum officinale*).



#### 5.0 CONCLUSION

Wetlands and streams in Ohio are regulated under the US Army Corps of Engineers (USACE) and the Ohio Environmental Protection Agency (Ohio EPA). USACE will initially make a determination as to whether the water resources on site are considered Waters of the United States (WOTUS) and federally jurisdictional. If it is determined that any water features present are considered non-jurisdictional by USACE, the OEPA will determine state jurisdiction.

It is the opinion of CT Consultants that all water features on-site are federally jurisdictional WOTUS with the exception of the two (2) labeled stormwater basins. A Section 404 and 401 permit is required to authorize the placement of any fill into WOTUS, including wetlands. If the project meets specific criteria, a Nationwide Permit may be applicable for the project. For instance, Nationwide Permit #29 can be used for residential developments and authorizes the loss of up to 1/2 an acre of waters of the U.S. including wetlands. For projects that have impacts over these levels, an Individual Permit and/or Water Quality Certification may be required by the USACE and/or the OEPA.

Coordination with other governmental agencies may also be necessary to obtain a permit. This may include archaeological analysis with the State Historic Preservation Office and evaluations for endangered species with the U.S. Fish and Wildlife. Because of the wooded area on this site, a bat habitat survey may need to be completed. Other endangered species may also need to be evaluated in relation to developing this site.

This wetland delineation will be supported by CT Consultants for five years from the date of this wetland delineation or date of Jurisdictional Determination verification letter from the U.S. Army Corps of Engineers, whichever is later. Wetland boundaries vary over time and will need to be re-evaluated after expired verification.



RDL Architects Laurel Lake

I hope the preceding information will be of help to you. Please feel free to contact me with any questions you may have concerning this report. CT Consultants looks forward to further serving you in the future.

Respectfully,

CT Consultants, Inc.

**Emily Nagle** 

**Environmental Specialist** 

Lindsey Jakovljevic

**Environmental Specialist** 

#### 6.0 SOURCES

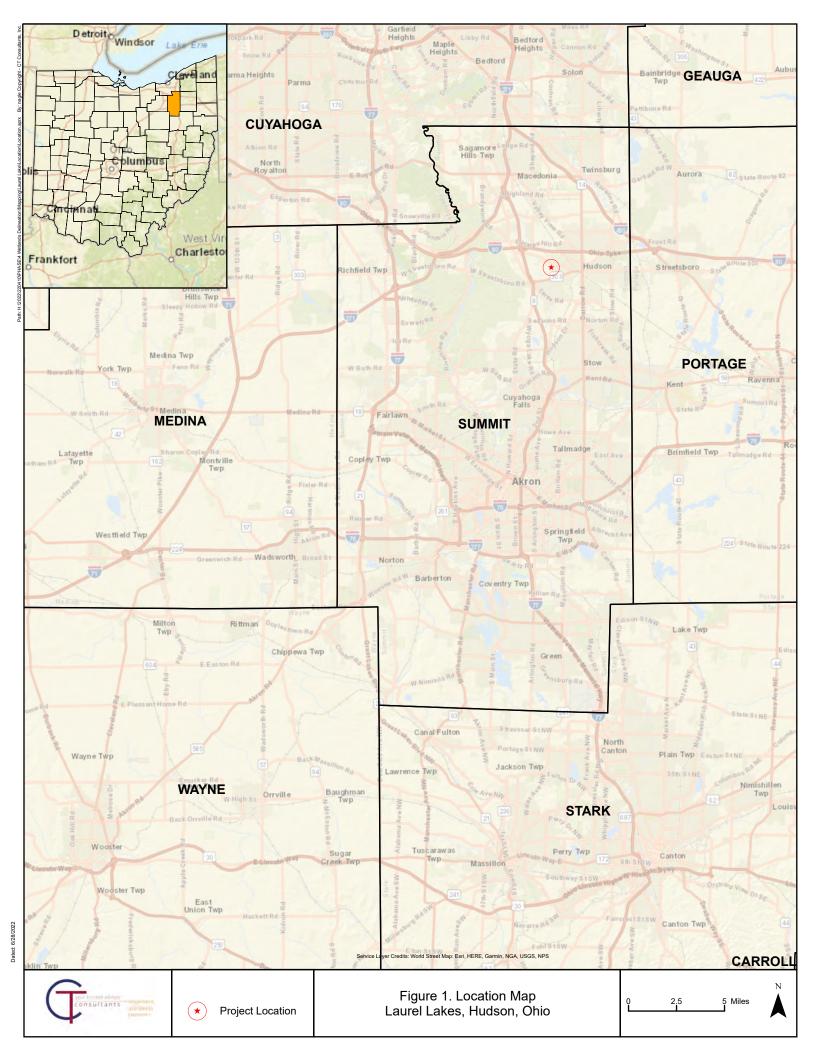
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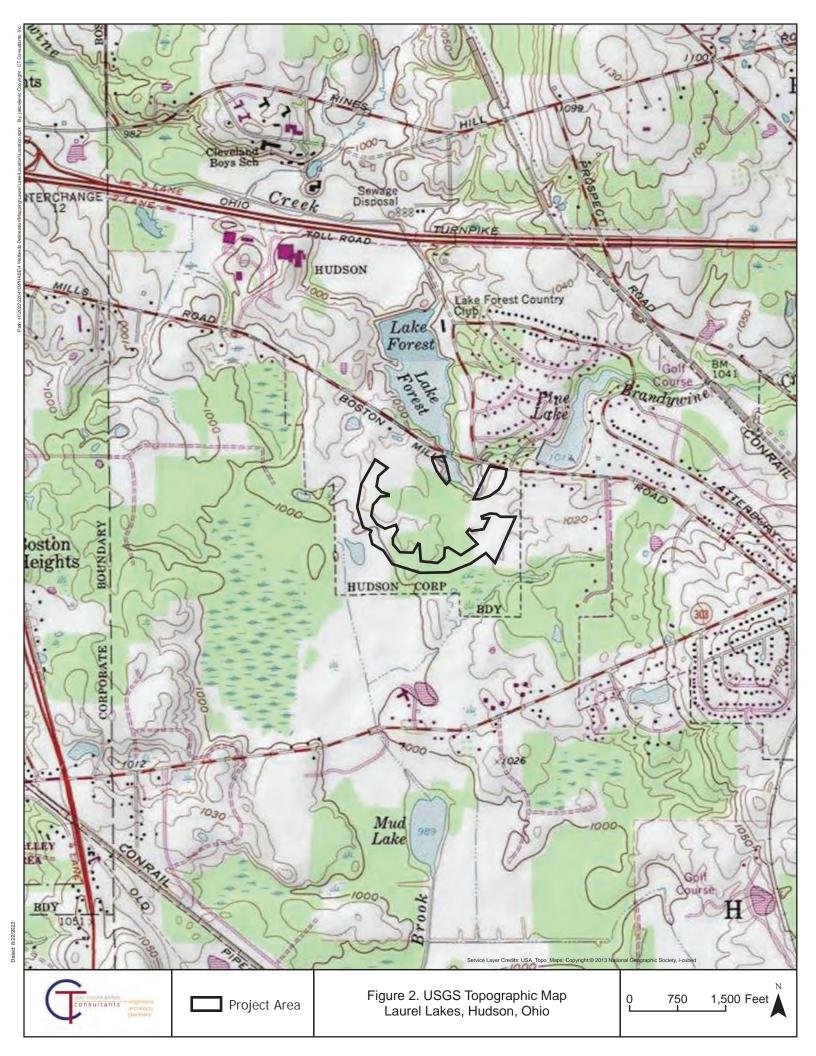
  April
  2020
  <a href="https://wildlife.ohiodnr.gov/portals/wildlife/pdfs/licenses%20&%20permits/OH%20Mussel%20Survey%20Protocol.pdf">https://wildlife.ohiodnr.gov/portals/wildlife/pdfs/licenses%20&%20permits/OH%20Mussel%20Survey%20Protocol.pdf</a>
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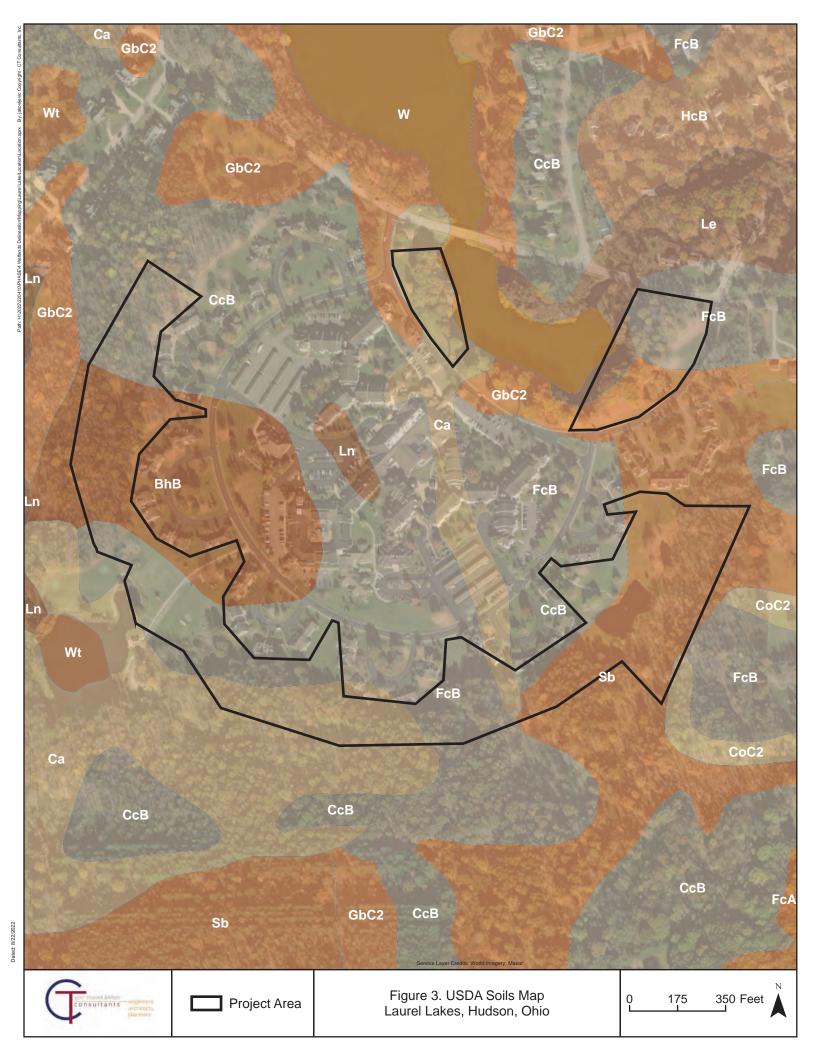


Appendix A

Resource Maps





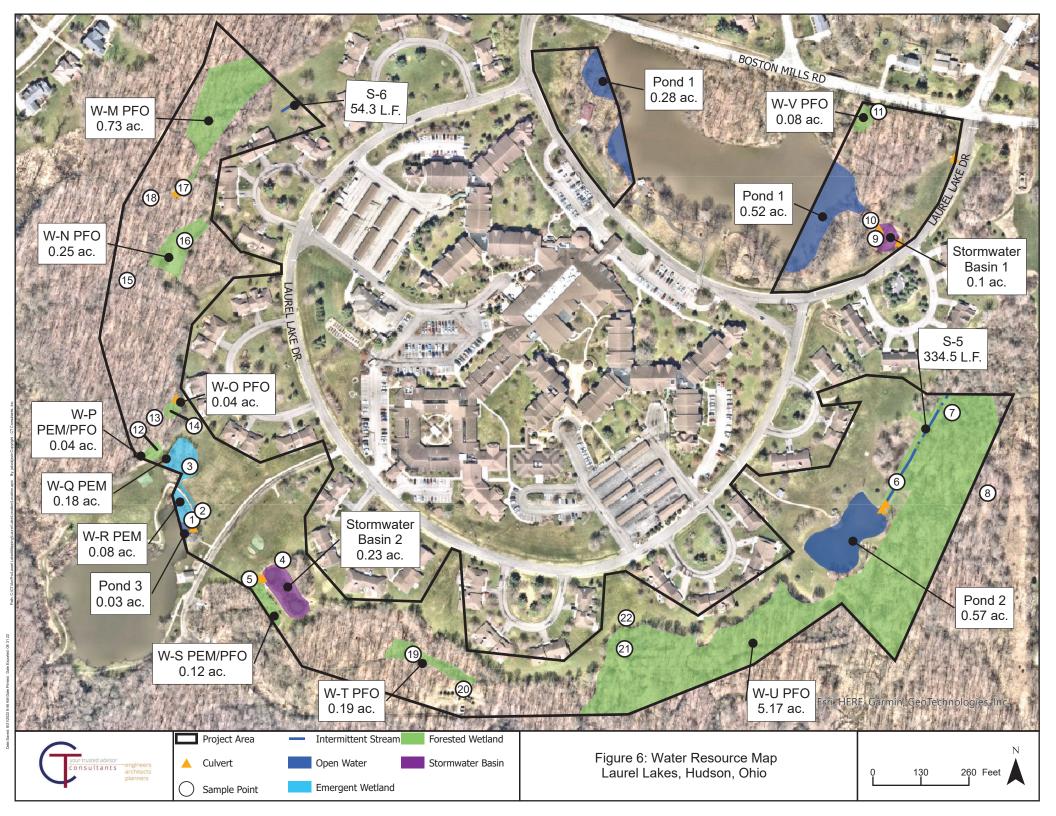






Appendix B

Delineation Map



Appendix C

Wetland Data Sheets

#### WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Laurel Lakes	City/County: Hudson/Summit Sampling Date: 06/23/2022
Applicant/Owner: RDL Architects	State: OH Sampling Point: 1
Investigator(s): Emily Nagle, Lindsey Jakovljevic	Section, Township, Range:
	I relief (concave, convex, none): Flat Slope %: 1
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.242452°	Long: -81.474642° Datum: NAD 83
Soil Map Unit Name: CcB	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N significantly distur-	
Are Vegetation N, Soil N, or Hydrology N naturally problem	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	npling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: W-R
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (	
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1)  Hydrogen Sulfide Odor	
Sediment Deposits (B2)  Oxidized Rhizospheres	
Drift Deposits (B3) Presence of Reduced Ir	
Algal Mat or Crust (B4)  Recent Iron Reduction i	
Iron Deposits (B5)  Thin Muck Surface (C7)	·
X Inundation Visible on Aerial Imagery (B7) Other (Explain in Rema	
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (inches)	r:
Water Table Present? Yes No X Depth (inches)	
Saturation Present? Yes X No Depth (inches)	: 4 Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pro	evious inspections), if available:
Remarks:	

/EGETATION – Use scientific names	Absolute	Dominant	Indicator		Sampling I	_		
<u>Tree Stratum</u> (Plot size:)	% Cover	Species?	Status	Dominance Test v	vorksheet:			
1. Quercus palustris	10	Yes	FACW	Number of Domina	nt Species			
2.				That Are OBL, FAC			2	(A)
3.				Total Number of Do	ominant			
4.				Species Across All	Strata:		2	(B)
5				Percent of Domina	nt Species			
6				That Are OBL, FAC		1	00.0%	_(A/B)
7.				Prevalence Index	worksheet:			
	10	=Total Cover		Total % Cove	er of:	Mu	tiply by:	
Sapling/Shrub Stratum (Plot size:	)			OBL species	5	x 1 = _	5	
1				FACW species	105	x 2 = _	210	
2				FAC species	0	x 3 =	0	
3.				FACU species	0	x 4 =	0	
4				UPL species	5	x 5 = _	25	
5				Column Totals:	115	(A)	240	(B)
6.				Prevalence	Index = B/A	· =	2.09	
7				Hydrophytic Vege	tation Indic	ators:		
		=Total Cover		1 - Rapid Test	for Hydroph	ytic Veg	etation	
Herb Stratum (Plot size:)				X 2 - Dominance	Test is >50	%		
1. Phalaris arundinacea	75	Yes	FACW	X 3 - Prevalence	Index is ≤3.	0 <sup>1</sup>		
2. Onoclea sensibilis	20	No	FACW	4 - Morphologi				-
3. Rubus occidentalis	5	No	UPL	data in Rem	arks or on a	separa	te sheet)	)
4. Typha angustifolia	5	No	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)			ain)	
5				Indicators of hydric soil and wetland hydrology must			must	
6.				be present, unless			natic.	
7				Definitions of Veg	jetation Stra	ata:		
9.				Tree – Woody plan diameter at breast				height.
10.					• .	, •		•
11.				Sapling/shrub – V and greater than or				DBH
12				Herb – All herbace	ous (non-wo	ody) pla	ants, reg	ardless
	105	=Total Cover		of size, and woody				
Woody Vine Stratum (Plot size:1.				Woody vines – All height.	woody vine	s greate	er than 3.	28 ft in
1				_				

=Total Cover

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

No \_\_\_

Yes X

Present?

SOIL Sampling Point 1

Profile Desc Depth	cription: (Describe t Matrix	to the de		<b>ıment tl</b> k Featur		ator or co	onfirm the absence of	f indicators.)
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-8	10YR 2/2	75	10YR 5/4	25	С	М	Loamy/Clayey	Distinct redox concentrations
8-20	10YR 2/2	70	10YR 5/1	15	С	PL/M	Loamy/Clayey	Distinct redox concentrations
			7.5YR 5/8	15	С	PL/M		Prominent redox concentrations
							<del></del> -	
							<del></del>	
	oncentration, D=Depl	etion, RN	N=Reduced Matrix, N	IS=Mas	ked San	d Grains.		L=Pore Lining, M=Matrix.
Hydric Soil			5 5.		(00) (			or Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1) pipedon (A2)		Polyvalue Below		ce (S8) (	LKK K,		rairie Redox (A16) ( <b>LRR K, L, MLRA 149B</b> )
	istic (A3)		Thin Dark Surfa		(LRR R	. MLRA		ucky Peat or Peat (S3) (LRR K, L, R)
	en Sulfide (A4)		High Chroma S					e Below Surface (S8) (LRR K, L)
	d Layers (A5)		Loamy Mucky I			-		rk Surface (S9) ( <b>LRR K, L</b> )
	d Below Dark Surface	e (A11)	Loamy Gleyed			. ,		nganese Masses (F12) (LRR K, L, R)
Thick Da	ark Surface (A12)		Depleted Matrix	κ (F3)			Piedmon	nt Floodplain Soils (F19) (MLRA 149B)
	Mucky Mineral (S1)		X Redox Dark Su	rface (F	<sup>7</sup> 6)		Mesic Sp	podic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
	Sleyed Matrix (S4)		Depleted Dark					ent Material (F21)
	Redox (S5)		Redox Depress		8)			allow Dark Surface (F22)
	Matrix (S6)		Marl (F10) ( <b>LR</b> l	R K, L)			Other (E	xplain in Remarks)
Dark Su	rface (S7)							
<sup>3</sup> Indicators o	f hydrophytic vegetat	ion and w	etland hydrology mu	ıst be pr	esent. u	nless dist	urbed or problematic.	
	Layer (if observed):		g,					
Type:								
Depth (ii	nches):						Hydric Soil Preser	nt? Yes X No
Remarks:	<del>_</del>		<u> </u>				<u> </u>	

#### WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Laurel Lakes	City/County: Hudson/Summit Sampling Date: 06/23/2022
Applicant/Owner: RDL Architects	State: OH Sampling Point: 2
Investigator(s): Emily Nagle, Lindsey Jakovljevic	Section, Township, Range:
	I relief (concave, convex, none): Flat Slope %: _ 1
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.242456°	Long: -81.474589° Datum: NAD 83
Soil Map Unit Name: CcB	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N significantly distu	<u> </u>
Are Vegetation N, Soil N, or Hydrology N naturally problem	atic? (If needed, explain any answers in Remarks.)
	npling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No X	Is the Sampled Area
Hydric Soil Present? Yes No X	within a Wetland? Yes No X
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (	
High Water Table (A2)  Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3)  Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1)  Hydrogen Sulfide Odor	
Sediment Deposits (B2)  Oxidized Rhizospheres	
Drift Deposits (B3)Presence of Reduced Ir	
Algal Mat or Crust (B4)  Recent Iron Reduction i	
Iron Deposits (B5)  Thin Muck Surface (C7)	
Inundation Visible on Aerial Imagery (B7)Other (Explain in Rema	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (inches)	
Water Table Present? Yes No X Depth (inches)	
Saturation Present? Yes No X Depth (inches)	: Wetland Hydrology Present? Yes No _X
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pro	evious inspections), if available:
Develop	
Remarks:	

<u> </u>	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1	70 0010.	Оросисси.	<u> </u>			
2.				Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
3.				Total Number of Dominant		_
l				Species Across All Strata:	3	(B)
5.				Percent of Dominant Species		
5.				That Are OBL, FACW, or FAC:	33.3%	_ (A/B)
7.				Prevalence Index worksheet:		
		=Total Cover		Total % Cover of:	Multiply by:	
Sapling/Shrub Stratum (Plot size:	)			OBL species 5 x	1 =5	
<u></u>				FACW species 0 x	2 =0	
				FAC species 32 x	3 = 96	
·				FACU species 60 x	4 = 240	
·				UPL species 0 x	5 = 0	
·				Column Totals: 97 (A	341	(B)
S				Prevalence Index = B/A =	3.52	
, 				Hydrophytic Vegetation Indicat	ors:	
		=Total Cover		1 - Rapid Test for Hydrophyti	c Vegetation	
Herb Stratum (Plot size:)				2 - Dominance Test is >50%		
. Poa pratensis	40	Yes	FACU	3 - Prevalence Index is ≤3.0 <sup>1</sup>		
. Juncus tenuis	30	Yes	FAC	4 - Morphological Adaptation		
3. Trifolium repens	20	Yes	FACU	data in Remarks or on a s	eparate sheet	)
Eleocharis obtusa	5	No	OBL	Problematic Hydrophytic Veg	etation <sup>1</sup> (Expl	ain)
5. Prunella vulgaris	2	No	FAC	<sup>1</sup> Indicators of hydric soil and wetla	and hydrology	must
5				be present, unless disturbed or p		
, 				Definitions of Vegetation Strata	a:	
3.				Tree – Woody plants 3 in. (7.6 cr	n) or more in	
)				diameter at breast height (DBH),		height
0.				Sapling/shrub – Woody plants le	ess than 3 in.	DBH
1				and greater than or equal to 3.28		
2				Herb – All herbaceous (non-wood	dy) plants, reg	ardles
	97	=Total Cover		of size, and woody plants less that		
Noody Vine Stratum (Plot size:	)			Woody vines – All woody vines	greater than 3.	.28 ft ir
				height.		
2				Hadron had b		
3.				Hydrophytic Vegetation		
i				Present? Yes	No X	
		=Total Cover				

SOIL Sampling Point 2

Depth	cription: (Describe t Matrix	to the de		<b>iment ti</b> k Featur		ator or co	onfirm the absence o	f indicators.)
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-8	10YR 2/2	75	10YR 5/4	25	С	М	Loamy/Clayey	Distinct redox concentrations
8-20	10YR 2/2	70	10YR 5/1	15	С	PL/M	Loamy/Clayey	Distinct redox concentrations
			7.5YR 5/8	15	С	PL/M		Prominent redox concentrations
							· ·-	
	oncentration, D=Depl	etion, RN	N=Reduced Matrix, N	IS=Mas	ked San	d Grains.		L=Pore Lining, M=Matrix.
Hydric Soil			5 5.		(00) (			or Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1) pipedon (A2)		Polyvalue Below		ce (S8) (	LKK K,		rairie Redox (A16) ( <b>LRR K, L, MLRA 149B</b> )
	istic (A3)		Thin Dark Surfa		(LRR R	. MLRA		ucky Peat or Peat (S3) (LRR K, L, R)
	en Sulfide (A4)		High Chroma S					e Below Surface (S8) (LRR K, L)
	d Layers (A5)		Loamy Mucky I			-		rk Surface (S9) (LRR K, L)
	d Below Dark Surface	e (A11)	Loamy Gleyed			. ,		nganese Masses (F12) (LRR K, L, R)
Thick Da	ark Surface (A12)		Depleted Matrix	κ (F3)			Piedmor	nt Floodplain Soils (F19) (MLRA 149B)
	Mucky Mineral (S1)		X Redox Dark Su	rface (F	<sup>7</sup> 6)		Mesic Sp	podic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
	Sleyed Matrix (S4)		Depleted Dark					ent Material (F21)
	Redox (S5)		Redox Depress		8)			allow Dark Surface (F22)
	Matrix (S6)		Marl (F10) ( <b>LR</b> l	R K, L)			Other (E	xplain in Remarks)
Dark Su	rface (S7)							
<sup>3</sup> Indicators o	f hydrophytic vegetat	ion and w	etland hydrology mu	ıst be pr	esent. u	nless dist	curbed or problematic.	
	Layer (if observed):		g,				, , , , , , , , , , , , , , , , , , ,	
Type:	, ,							
Depth (ii	nches):						Hydric Soil Preser	nt? Yes No X
Remarks:							ļ.	

#### WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Laurel Lakes	City/County: Hudson/Summit Sampling Date: 06/23/2022				
Applicant/Owner: RDL Architects	State: OH Sampling Point: 3				
Investigator(s): Emily Nagle, Lindsey Jakovljevic	Section, Township, Range:				
	relief (concave, convex, none): Flat Slope %: 0				
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.242851°	Long: -81.474657° Datum: NAD 83				
Soil Map Unit Name: CcB	NWI classification:				
Are climatic / hydrologic conditions on the site typical for this time of year?					
, ,	<u> </u>				
Are Vegetation N, Soil N, or Hydrology N significantly disturb	<del></del>				
Are Vegetation N, Soil N, or Hydrology N naturally problems	atic? (If needed, explain any answers in Remarks.)				
<b>SUMMARY OF FINDINGS – Attach site map showing sam</b>	pling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area				
Hydric Soil Present?  Yes X No	within a Wetland? Yes X No				
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: W-Q				
Remarks: (Explain alternative procedures here or in a separate report.)					
Tromaine. (Explain alternative procedures here of in a coparate reports)					
HYDROLOGY					
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)				
Surface Water (A1) Water-Stained Leaves (E	B9) Drainage Patterns (B10)				
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
Saturation (A3) — Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Odor (					
Sediment Deposits (B2) Oxidized Rhizospheres of the control of the					
Drift Deposits (B3) Presence of Reduced Iro					
Algal Mat or Crust (B4)  Recent Iron Reduction in This Much Carfora (O7)					
Iron Deposits (B5)  Thin Muck Surface (C7)  Valuate in Visible on Assist Imagen (B7)  Other (Fynlein in Remove					
X Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar Sparsely Vegetated Concave Surface (B8)	rks) X Microtopographic Relief (D4) X FAC-Neutral Test (D5)				
	A FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No X Depth (inches):  Water Table Present? Yes No X Depth (inches):					
Saturation Present? Yes X No Depth (inches):					
(includes capillary fringe)	Welland Hydrology Fresent: Fes X No				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:				
	, ,,				
Remarks:					

Torra Otraduca (Distraina	Absolute	Dominant	Indicator	Danis and Table		- 4		
<u>Tree Stratum</u> (Plot size:)  1.	% Cover	Species?	Status	Dominance Test	worksnee	et:		
2.				Species Across All Strata:  Percent of Dominant Species			2	(A)
3.     4.							2	(B)
5. 6.						00.0%	(A/B	
7.				Prevalence Inde	x workshe	eet:		
		=Total Cover	Total % Cover of: Multiply by:					
Sapling/Shrub Stratum (Plot size:	)			OBL species	70	x 1 =	70	
1				FACW species	30	x 2 =	60	
2.				FAC species	0	x 3 =	0	
3.				FACU species	0	x 4 =	0	
4.				UPL species	0	x 5 =	0	
5.				Column Totals:	100	(A)	130	<u>—</u> (В
6.				Prevalence	e Index =	B/A =	1.30	
7.				Hydrophytic Veg	getation In	dicators:		
		=Total Cover			1 - Rapid Test for Hydrophytic Vegetation			
Herb Stratum (Plot size:)	<u>Stratum</u> (Plot size:				X 2 - Dominance Test is >50%			
1. Juncus effusus	35	Yes	OBL	X 3 - Prevalenc	e Index is	≤3.0 <sup>1</sup>		
2. Phalaris arundinacea	30	Yes	FACW	4 - Morpholog	gical Adapt	tations¹ (Pr	ovide su	pportir
3. Scirpoides holoschoenus	15	No	OBL	data in Rei	marks or o	n a separa	te sheet)	)
4. Carex lupuliformis	10	No	OBL	Problematic H	Hydrophyti	c Vegetatio	on¹ (Expla	ain)
5. Carex vulpinoidea	5	No	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must				
6. Myosotis scorpioides	5	No	OBL	be present, unless disturbed or problematic.			must	
7.				Definitions of Ve	getation	Strata:		
8. 9.				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.				
10				Sapling/shrub –	Woody pla	ants less th	an 3 in. [	
11.				and greater than	or equal to	3.28 ft (1 i	m) tall.	
12.		=Total Cover		<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.				
Woody Vine Stratum (Plot size:1.	<u></u>				<b>Woody vines</b> – All woody vines greater than 3.28 ft height.			
2.				Ü				
3.				Hydrophytic				
4.				Vegetation Present?	Yes X	No		
						-		

US Army Corps of Engineers

SOIL Sampling Point 3

Depth	cription: (Describe t Matrix	o the de	•	ı <b>ment tl</b> c Featur		ator or c	onfirm the absence o	f indicators.)
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-10	10YR 2/1	85	7.5YR 4/4	15	С	PL/M	Mucky Loam/Clay	Prominent redox concentrations
10-20	10YR 5/1	90	7.5YR 4/4	10	С	PL/M	Loamy/Clayey	Prominent redox concentrations
					_			
<sup>1</sup> Type: C=C	oncentration, D=Depl	etion, RN	N=Reduced Matrix, N	IS=Mas	ked San	d Grains.	<sup>2</sup> Location: P	L=Pore Lining, M=Matrix.
Black Hi Hydroge Stratified X Depleted Thick Da Sandy M Sandy G Sandy R Stripped Dark Su	(A1) bipedon (A2) stic (A3) en Sulfide (A4) d Layers (A5) d Below Dark Surface ark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4) Redox (S5) I Matrix (S6) rface (S7)		Polyvalue Belo MLRA 149B Thin Dark Surfa High Chroma S Loamy Mucky I Loamy Gleyed Depleted Matrix X Redox Dark Su Depleted Dark Redox Depress Marl (F10) (LR	ace (S9) cands (Se) dineral Matrix (context) face (F3) rface (F) Surface sions (F) R K, L)	(LRR R 611) (LRI (F1) (LR F2) 66) (F7)	, MLRA R K, L) R K, L)	2 cm Mu Coast Pi 5 cm Mu Polyvalu Thin Dar Iron-Mar Piedmor Mesic Si Red Par Very Sha Other (E	or Problematic Hydric Soils <sup>3</sup> : ack (A10) (LRR K, L, MLRA 149B) rairie Redox (A16) (LRR K, L, R) acky Peat or Peat (S3) (LRR K, L, R) be Below Surface (S8) (LRR K, L) ack Surface (S9) (LRR K, L) anganese Masses (F12) (LRR K, L, R) be Floodplain Soils (F19) (MLRA 149B) podic (TA6) (MLRA 144A, 145, 149B) ent Material (F21) allow Dark Surface (F22) explain in Remarks)
	f hydrophytic vegetati  Layer (if observed):	ion and w	vetland hydrology mu	ıst be pı	resent, u	nless dis	turbed or problematic.	
Type:	Layer (ii observed).							
Depth (i	nches):						Hydric Soil Prese	nt? Yes X No No
Remarks:								

Project/Site: Laurel Lakes	City/County: Hudson/Summit Sampling Date: 06/23/2022
Applicant/Owner: RDL Architects	State: OH Sampling Point: 4
Investigator(s): Emily Nagle, Lindsey Jakovljevic	Section, Township, Range:
	I relief (concave, convex, none): Flat Slope %: 10
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.242048°	Long: -81.473642° Datum: NAD 83
Soil Map Unit Name: CcB	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N significantly distu	
Are Vegetation N, Soil N, or Hydrology N naturally problem	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing san	npling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No X	Is the Sampled Area
Hydric Soil Present? Yes No X	within a Wetland? Yes No X
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (	
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3)Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor	
Sediment Deposits (B2)  Oxidized Rhizospheres	
Drift Deposits (B3) Presence of Reduced In	<u> </u>
Algal Mat or Crust (B4)  Recent Iron Reduction i	
Iron Deposits (B5)  Thin Muck Surface (C7)	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rema	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (inches)	r:
Water Table Present? Yes No X Depth (inches)	
Saturation Present? Yes No X Depth (inches)	: Wetland Hydrology Present? Yes No _X
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	evious inspections), if available:
Remarks:	

VEGETATION – Use scientific names of plants. Samplir	ng Point:	4
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<u>Tree Stratum</u> (Plot size:	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Acer rubrum	30	Yes	FAC	Number of Deminant Chasics
2. Quercus palustris	25	Yes	FACW	Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
3.		· <u></u>		Total Number of Dominant
4.				Species Across All Strata: 7 (B)
5.	•			Descent of Deminant Charles
6.				Percent of Dominant Species That Are OBL, FACW, or FAC: 42.9% (A/B)
7.				Prevalence Index worksheet:
	55	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: )		•		OBL species 0 x 1 = 0
1. Lonicera maackii	20	Yes	UPL	FACW species 30 x 2 = 60
2.		· <u></u>		FAC species 45 x 3 = 135
3.				FACU species 45 x 4 = 180
4.				UPL species 55 x 5 = 275
5.				Column Totals: 175 (A) 650 (B)
6.				Prevalence Index = B/A = 3.71
7.				Hydrophytic Vegetation Indicators:
	20	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size:		•		2 - Dominance Test is >50%
1. Poa pratensis	30	Yes	FACU	3 - Prevalence Index is ≤3.0 <sup>1</sup>
Toxicodendron radicans	15	Yes	FAC	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
Rubus occidentalis	15	Yes	UPL	data in Remarks or on a separate sheet)
4. Trifolium repens	15	Yes	FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5. Lonicera maackii	10	No	UPL	
6. Bellis perennis	10	No	UPL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7. Quercus palustris	5	No	FACW	Definitions of Vegetation Strata:
8.		140	TAOW	Deminions of Vegetation Strata.
9.				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
10.				diameter at breast neight (DBH), regardless of height.
				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
12.				and greater than or equal to 3.26 it (1 iii) tail.
12.	100	=Total Cover		<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: )	100	= Total Cover		of size, and woody plants less than 3.20 it tall.
				<b>Woody vines</b> – All woody vines greater than 3.28 ft in
1				height.
2.				Hydrophytic
3.				Vegetation Present? Yes No X
4		Tatal Causa		Present? Yes No X
Demonstrate (Inches of the Inches of the Inc	ata ale cons	=Total Cover		1
Remarks: (Include photo numbers here or on a separ	ate sneet.)			

"Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.  "Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.  "Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.  "Location: PL=Pore Lining, M=Matrix.  "Location: PL=Pore Lining, M=Matrix.  Indicators for Problematic Hydric Soils*:  Indicators of Problematic Hydric Soils*:  Indicators for Problematic Hydric Soils*:  Indicators for Problematic Hydric Soils*:  Indicators of Hydric Hydric Soils*:  Indicators of Hydric Hydric Hydric Hydric Hydric Hydric Soils*:  Indicators of Hydric Hydric Hydric Hydric Soils*:  Indicators of Hydric Hydric Hydric Hydric Hydric Hydric Hydric Soils*:  Indicators of Hydric Hyd	Depth	Matrix		Redo	x Featur	es				
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.  Hydric Soil Indicators: Histosol (A1) Histo Epipedon (A2) Black Histic Epipedon (A2) Black Histic (A3) High Chroma Sands (S11) (LRR K, L) Hydrogen Sulfide (A4) High Chroma Sands (S11) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Sandy Mucky Mineral (F1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mineral (S1) Sandy Gleyed Matrix (S4) Depleted Dark Surface (A12) Depleted Dark Surface (A12) Sandy Matrix Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S4) Dark Surface (S7) Stripped Matrix (S6) Marl (F10) (LRR K, L) Dark Surface (S7)  Marl (F10) (LRR K, L) Other (Explain in Remarks)  "Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils*:  "Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils*:  "Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils*:  "Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils*:  "Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils*:  "Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils*:  "Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils*:  "Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils*:  "Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils*:  "Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils*:  "Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soil Present? Yes No No	(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Rema	rks
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.  Hydric Soil Indicators: Histocol (A1) Histic Epipedon (A2) Black Histic (A3) Black Histic (A3) High Chroma Sands (S11) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A12) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Matrix (S4) Depleted Dark Surface (F7) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) Arich Markard (S1) Stripped Matrix (S6) Dark Surface (S7) Arich Markard (S1) Stripped Matrix (S6) Dark Surface (S7) Arich Markard (S1) Stripped Matrix (S6) Dark Surface (S7) Arich Markard (S1) Dark Surface (S7) Arich Markard (S2) Dark Surface (S3) Dark Surface (S	0-3	10YR 4/1	100					Loamy/Clayey		
Hydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 1498)  Histic Epipedon (A2)  MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, R)  Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Redox Dark Surface (F6)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F7)  Red Parent Material (F21)  Sandy Redox (S5)  Stripped Matrix (S6)  Dark Surface (S7)  And I (F10) (LRR K, L)  Polyvalue Below Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Polyvalue Below Surface (S8) (LRR K, L)  Polyvalue Below Surface (S8) (LRR K, L)  Polyvalue Below Surface (S9) (LRR K, L)  Polyvalue Below Canton (Sa) (LRR K										
Hydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R, Histosol (A2)  MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Britinged Matrix (S6)  Dark Surface (S9)  MLRA 149B)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  Street Mucky Peat or Peat (S3) (LRR K, L, P)  Polyvalue Below Surface (S8) (LRR K, L, L)  Polyvalue Below Surface (S8) (LRR K, L, L)  Thin Dark Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Piedmont Floodplain Soils (F19) (MLRA 1  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F7)  Red Parent Material (F21)  Sandy Redox (S5)  Stripped Matrix (S6)  Marl (F10) (LRR K, L)  Dark Surface (S7)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if observed):  Type:  Roots  Depth (inches):  3  Hydric Soil Present?  Yes  No  X										
Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B)  Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)  Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, Hydrogen Sulfide (A4) High Chroma Sands (S11) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L)  Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thin Dark Surface (S9) (LRR R, L)  Depleted Below Dark Surface (A11) Loamy Gleyed Matrix (F2) Iron-Manganese Masses (F12) (LRR K, L)  Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Mesic Spodic (TA6) (MLRA 144A, 145, 14)  Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Red Parent Material (F21)  Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (F22)  Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks)  Dark Surface (S7)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if observed):  Type: Roots  Depth (inches): 3 Hydric Soil Present? Yes No X										
Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B)  Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)  Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, Hydrogen Sulfide (A4) High Chroma Sands (S11) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L)  Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thin Dark Surface (S9) (LRR R, L)  Depleted Below Dark Surface (A11) Loamy Gleyed Matrix (F2) Iron-Manganese Masses (F12) (LRR K, L)  Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Mesic Spodic (TA6) (MLRA 144A, 145, 14)  Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Red Parent Material (F21)  Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (F22)  Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks)  Dark Surface (S7)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if observed):  Type: Roots  Depth (inches): 3 Hydric Soil Present? Yes No X										
Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B)  Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)  Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, Hydrogen Sulfide (A4) High Chroma Sands (S11) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L)  Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thin Dark Surface (S9) (LRR R, L)  Depleted Below Dark Surface (A11) Loamy Gleyed Matrix (F2) Iron-Manganese Masses (F12) (LRR K, L)  Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Mesic Spodic (TA6) (MLRA 144A, 145, 14)  Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Red Parent Material (F21)  Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (F22)  Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks)  Dark Surface (S7)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if observed):  Type: Roots  Depth (inches): 3 Hydric Soil Present? Yes No X										
Hydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R, Histosol (A2)  MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Britinged Matrix (S6)  Marl (F10) (LRR K, L)  Depleted Dark Surface (S9)  Stripped Matrix (S6)  Marl (F10) (LRR K, L)  Marl (F10) (LRR K, L)  Hydric Soil Present?  Hydric Soil S:  1 cm Mucky (A10) (LRR K, L, MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, R)  Coast Prairie Redox (A16) (LRR K, L, R)  Coast Prairie Redox (A16) (LRR K, L, R)  For Mucky Peat or Peat (S3) (LRR K, L, L)  For Mucky Peat or Peat (S3) (LRR K, L)  For Mucky Peat or Peat (S3) (LRR K, L)  For Mu										
Hydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R,  Histosol (A2)  MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, R)  Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Breith Dark Surface (F7)  Sandy Redox (S5)  Stripped Matrix (S6)  Dark Surface (S7)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Indicators for Problematic Hydric Soils 3:  2 cm Muck (A10) (LRR K, L, MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, R)  5 cm Mucky Peat or Peat (S3) (LRR K, L, L)  Polyvalue Below Surface (S3) (LRR K, L, L)  Polyvalue Below Surface (S8) (LRR K, L, L)  Polyvalue Below Surface (S9) (LRR K, L, R)  Thin Dark Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Polyvalue Below Canton (A16) (LRR K, L, R)  Polyvalue Below (A16) (LRR K, L, R)  To mucky Peat or Peat (S3) (LRR K, L, R)  Polyvalue Below (A16) (LRR K, L)  Polyvalu										
Hydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 1498)  Histic Epipedon (A2)  MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, R)  Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Redox Dark Surface (F6)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F7)  Red Parent Material (F21)  Sandy Redox (S5)  Stripped Matrix (S6)  Dark Surface (S7)  And I (F10) (LRR K, L)  Polyvalue Below Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Polyvalue Below Surface (S8) (LRR K, L)  Polyvalue Below Surface (S8) (LRR K, L)  Polyvalue Below Surface (S9) (LRR K, L)  Polyvalue Below Canton (Sa) (LRR K										
Hydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 1498)  Histic Epipedon (A2)  MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, R)  Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  Stratified Layers (A5)  Loamy Mucky Mineral (F1) (LRR K, L)  Thick Dark Surface (A11)  Depleted Below Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Stripped Matrix (S4)  Derested Dark Surface (S9)  Stripped Matrix (S6)  Marl (F10) (LRR K, L)  Derested Dark Surface (A72)  Sandy Redox (S5)  Stripped Matrix (S6)  Dark Surface (S7)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if observed):  Type:  Roots  Depth (inches):  3  Indicators for Problematic Hydric Soils ?:  Indicators for Problematic Hydric Soils ?:  Indicators for Problematic Hydric Soils?:  Lame Muck (A10) (LRR K, L, Car Muck (A10) (LRR K, L, R)  Coast Prairie Redox (A16) (LRR K, L, R)  For Mucky Peat or Peat (S3) (LRR K, L, R)  For Mucky Peat or Peat (S3) (LRR K, L, R)  For Mucky Peat or Peat (S3) (LRR K, L, R)  For Mucky Peat or Peat (S3) (LRR K, L, R)  For Mucky Peat or Peat (S3) (LRR K, L, R)  For Mucky Peat or Peat (Sa) (LRR K, L, R)  For Mucky Peat or Peat (Sa) (LRR K, L, R)  For Mucky Peat or Peat (Sa) (LRR K, L, R)  For Mucky Peat or Peat (Sa) (LRR K, L, R)  For Mucky Peat or Peat (Sa) (LRR K, L, R)  For Mucky Peat or Peat (Sa) (LRR K, L, R)  For Mucky Peat or Peat (Sa) (LRR K, L, R)  For Mucky Peat or Peat (Sa) (LRR K, L, R)  For Mucky Peat or Peat (Sa) (LRR K, L, R)  For Mucky Peat or Peat (Sa) (LRR K, L, R)  For Mucky Peat or Peat (Sa) (LRR K, L, R)  For Mucky Peat or Peat (Sa) (LRR K, L)  For Mucky Peat or Peat (Sa) (LRR K, L)  For Mucky Peat or Peat (Sa) (LRR K, L)  For Mucky Peat or Peat (Sa) (LRR K, L)  For Mucky Peat or Peat (Sa) (LRR K, L)  For Mucky Peat or Peat (Sa) (LRR K, L)  For Mucky Peat or Peat (Sa) (LRR K, L)  For Muc										
Hydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 1498)  Histic Epipedon (A2)  MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, R)  Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  Stratified Layers (A5)  Loamy Mucky Mineral (F1) (LRR K, L)  Thick Dark Surface (A11)  Depleted Below Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Stripped Matrix (S4)  Derested Dark Surface (S9)  Stripped Matrix (S6)  Marl (F10) (LRR K, L)  Derested Dark Surface (A72)  Sandy Redox (S5)  Stripped Matrix (S6)  Dark Surface (S7)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if observed):  Type:  Roots  Depth (inches):  3  Indicators for Problematic Hydric Soils ?:  Indicators for Problematic Hydric Soils ?:  Indicators for Problematic Hydric Soils?:  Lame Muck (A10) (LRR K, L, Car Muck (A10) (LRR K, L, R)  Coast Prairie Redox (A16) (LRR K, L, R)  For Mucky Peat or Peat (S3) (LRR K, L, R)  For Mucky Peat or Peat (S3) (LRR K, L, R)  For Mucky Peat or Peat (S3) (LRR K, L, R)  For Mucky Peat or Peat (S3) (LRR K, L, R)  For Mucky Peat or Peat (S3) (LRR K, L, R)  For Mucky Peat or Peat (Sa) (LRR K, L, R)  For Mucky Peat or Peat (Sa) (LRR K, L, R)  For Mucky Peat or Peat (Sa) (LRR K, L, R)  For Mucky Peat or Peat (Sa) (LRR K, L, R)  For Mucky Peat or Peat (Sa) (LRR K, L, R)  For Mucky Peat or Peat (Sa) (LRR K, L, R)  For Mucky Peat or Peat (Sa) (LRR K, L, R)  For Mucky Peat or Peat (Sa) (LRR K, L, R)  For Mucky Peat or Peat (Sa) (LRR K, L, R)  For Mucky Peat or Peat (Sa) (LRR K, L, R)  For Mucky Peat or Peat (Sa) (LRR K, L, R)  For Mucky Peat or Peat (Sa) (LRR K, L)  For Mucky Peat or Peat (Sa) (LRR K, L)  For Mucky Peat or Peat (Sa) (LRR K, L)  For Mucky Peat or Peat (Sa) (LRR K, L)  For Mucky Peat or Peat (Sa) (LRR K, L)  For Mucky Peat or Peat (Sa) (LRR K, L)  For Mucky Peat or Peat (Sa) (LRR K, L)  For Muc										
Hydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R,  Histosol (A2)  MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, R)  Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Breith Dark Surface (F7)  Sandy Redox (S5)  Stripped Matrix (S6)  Dark Surface (S7)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Indicators for Problematic Hydric Soils 3:  2 cm Muck (A10) (LRR K, L, MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, R)  5 cm Mucky Peat or Peat (S3) (LRR K, L, L)  Polyvalue Below Surface (S3) (LRR K, L, L)  Polyvalue Below Surface (S8) (LRR K, L, L)  Polyvalue Below Surface (S9) (LRR K, L, R)  Thin Dark Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Polyvalue Below Canton (A16) (LRR K, L, R)  Polyvalue Below (A16) (LRR K, L, R)  To mucky Peat or Peat (S3) (LRR K, L, R)  Polyvalue Below (A16) (LRR K, L)  Polyvalu										
Hydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R, Histosol (A2)  MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Britinged Matrix (S6)  Dark Surface (S9)  MLRA 149B)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  Street Mucky Peat or Peat (S3) (LRR K, L, P)  Polyvalue Below Surface (S8) (LRR K, L, L)  Polyvalue Below Surface (S8) (LRR K, L, L)  Thin Dark Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Piedmont Floodplain Soils (F19) (MLRA 1  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F7)  Red Parent Material (F21)  Sandy Redox (S5)  Stripped Matrix (S6)  Marl (F10) (LRR K, L)  Dark Surface (S7)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if observed):  Type:  Roots  Depth (inches):  3  Hydric Soil Present?  Yes  No  X										
Hydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R, Histosol (A2)  MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Britinged Matrix (S6)  Marl (F10) (LRR K, L)  Depleted Dark Surface (S9)  MLRA 149B)  Stratified Layers (A5)  Depleted Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Redox (S5)  Stripped Matrix (S4)  Depleted Dark Surface (F7)  Sandy Redox (S5)  Marl (F10) (LRR K, L)  Dark Surface (S7)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if observed):  Type:  Roots  Depth (inches):  3  Indicators for Problematic Hydric Soils ?:  Indicators for Problematic Hydros Soils  Pom Muck (A10) (LRR K, L, R)  Polyvalue Below Curface (S3) (LRR K, L, R)  Polyvalue Below Curface (S9) (LRR K, L)  Polyvalue Below Curface (S										
Hydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R, Histosol (A2)  MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Britinged Matrix (S6)  Marl (F10) (LRR K, L)  Depleted Dark Surface (S9)  MLRA 149B)  Stratified Layers (A5)  Depleted Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Redox (S5)  Stripped Matrix (S4)  Depleted Dark Surface (F7)  Sandy Redox (S5)  Marl (F10) (LRR K, L)  Dark Surface (S7)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if observed):  Type:  Roots  Depth (inches):  3  Indicators for Problematic Hydric Soils ?:  Indicators for Problematic Hydros Soils  Pom Muck (A10) (LRR K, L, R)  Polyvalue Below Curface (S3) (LRR K, L, R)  Polyvalue Below Curface (S9) (LRR K, L)  Polyvalue Below Curface (S										
Hydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R,  Histosol (A2)  MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, R)  Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Breith Dark Surface (F7)  Sandy Redox (S5)  Stripped Matrix (S6)  Dark Surface (S7)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Indicators for Problematic Hydric Soils 3:  2 cm Muck (A10) (LRR K, L, MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, R)  5 cm Mucky Peat or Peat (S3) (LRR K, L, L)  Polyvalue Below Surface (S3) (LRR K, L, L)  Polyvalue Below Surface (S8) (LRR K, L, L)  Polyvalue Below Surface (S9) (LRR K, L, R)  Thin Dark Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Polyvalue Below Canton (A16) (LRR K, L, R)  Polyvalue Below (A16) (LRR K, L, R)  To mucky Peat or Peat (S3) (LRR K, L, R)  Polyvalue Below (A16) (LRR K, L)  Polyvalu				_						
Hydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R, Histosol (A2)  MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Britinged Matrix (S6)  Marl (F10) (LRR K, L)  Depleted Dark Surface (S9)  MLRA 149B)  Stratified Layers (A5)  Depleted Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Redox (S5)  Stripped Matrix (S4)  Depleted Dark Surface (F7)  Sandy Redox (S5)  Marl (F10) (LRR K, L)  Dark Surface (S7)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if observed):  Type:  Roots  Depth (inches):  3  Indicators for Problematic Hydric Soils ?:  Indicators for Problematic Hydros Soils  Pom Muck (A10) (LRR K, L, R)  Polyvalue Below Curface (S3) (LRR K, L, R)  Polyvalue Below Curface (S9) (LRR K, L)  Polyvalue Below Curface (S	T C. C			Dadwaad Matrix N	1C Mass	Lad Can		21 anations DI Day	Lining NA NA	
Histosol (A1)			elion, Rivi=r	Reduced Matrix, I	/IS=IVIAS	keu Sand	Grains.			
Histic Epipedon (A2)  Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  5 cm Mucky Peat or Peat (S3) (LRR K, L, R)  High Chroma Sands (S11) (LRR K, L)  Polyvalue Below Surface (S9) (LRR K, L)  Stratified Layers (A5)  Loamy Mucky Mineral (F1) (LRR K, L)  Thin Dark Surface (A11)  Depleted Below Dark Surface (A11)  Loamy Gleyed Matrix (F2)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Redox Dark Surface (F6)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Redox Depressions (F8)  Stripped Matrix (S6)  Dark Surface (S7)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if observed):  Type:  Roots  Redox Dark Surface (S9) (LRR K, L)  Polyvalue Below Quitar (S3) (LRR K, L)  Polyvalue Below Surface (S9) (LRR K, L)  Polyvalue Below Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Polyvalue Below Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Polyvalue Below Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Polyvalue Below Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Polyvalue Below Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Polyvalue Below Surface (S9) (LRR K, L)  Thin Dark Surface (S1)  Thin Dark Surface (S1)  Redox Dark Surface (F6)  Mesic Spodic (TA6) (MLRA 144A, 145, 14  Thin Dark Surface (S9) (LRR K, L)  Thin Dark Surface (S1)  Thin D	-			Polyvalue Beld	w Surfa	ce (S8) (I	IRRR		_	
Black Histic (A3)			_			(00) (1	LIXIX IX,			
Hydrogen Sulfide (A4)  High Chroma Sands (S11) (LRR K, L)  Polyvalue Below Surface (S8) (LRR K, L)  Stratified Layers (A5)  Loamy Mucky Mineral (F1) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Depleted Below Dark Surface (A11)  Loamy Gleyed Matrix (F2)  Iron-Manganese Masses (F12) (LRR K, L)  Thick Dark Surface (A12)  Depleted Matrix (F3)  Piedmont Floodplain Soils (F19) (MLRA 1  Sandy Mucky Mineral (S1)  Redox Dark Surface (F6)  Mesic Spodic (TA6) (MLRA 144A, 145, 14  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F7)  Red Parent Material (F21)  Sandy Redox (S5)  Redox Depressions (F8)  Very Shallow Dark Surface (F22)  Stripped Matrix (S6)  Marl (F10) (LRR K, L)  Other (Explain in Remarks)  Dark Surface (S7)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if observed):  Type:  Roots  Depth (inches):  3  Hydric Soil Present? Yes No X					•	(LRR R	. MLRA 1			
Stratified Layers (A5)			_							
Depleted Below Dark Surface (A11)  Loamy Gleyed Matrix (F2)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Stripped Matrix (S6)  Dark Surface (S7)  Piedmont Floodplain Soils (F19) (MLRA 1 445, 145, 146)  Redox Dark Surface (F7)  Red Parent Material (F21)  Very Shallow Dark Surface (F22)  Stripped Matrix (S6)  Dark Surface (S7)  Pindicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if observed):  Type:  Roots  Depth (inches):  3  Hydric Soil Present?  Yes  No  X			_				-			
Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Stripped Matrix (S6)  Dark Surface (S7)  Bradicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Bradicators of hydroserved):  Type:  Roots  Depth (inches):  3  Piedmont Floodplain Soils (F19) (MLRA 1  Mesic Spodic (TA6) (MLRA 144A, 145, 14  Redox Dark Surface (F7)  Red Parent Material (F21)  Very Shallow Dark Surface (F22)  Other (Explain in Remarks)  Other (Explain in Remarks)  Hydric Soil Present?  Yes  No X			(A11)				, ,			
Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Redox Depressions (F8)  Stripped Matrix (S6)  Dark Surface (S7)  Plandicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if observed):  Type:  Roots  Depth (inches):  3  Hydric Soil Present?  Yes  No  X			` ′ _			,				
Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (F22)  Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks)  Bindicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if observed):  Type: Roots  Depth (inches): 3 Hydric Soil Present? Yes No X	Sandy M	Mucky Mineral (S1)		Redox Dark Su	urface (F	6)		Mesic Spodic	(TA6) ( <b>MLRA 1</b>	44A, 145, 149B
Stripped Matrix (S6)	Sandy G	Gleyed Matrix (S4)		Depleted Dark	Surface	(F7)		Red Parent M	aterial (F21)	
Dark Surface (S7)  Sindicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if observed):  Type: Roots  Depth (inches): 3 Hydric Soil Present? Yes No X	Sandy R	Redox (S5)	_	Redox Depres	sions (F	3)		Very Shallow	Dark Surface (F	22)
Pindicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if observed):  Type: Roots  Depth (inches): 3 Hydric Soil Present? Yes No X	Stripped	l Matrix (S6)	_	Marl (F10) ( <b>LR</b>	R K, L)			Other (Explain	in Remarks)	
Restrictive Layer (if observed):  Type: Roots  Depth (inches): 3 Hydric Soil Present? Yes No X	Dark Su	rface (S7)								
Restrictive Layer (if observed):  Type: Roots  Depth (inches): 3 Hydric Soil Present? Yes No X										
Type:         Roots           Depth (inches):         3           Hydric Soil Present?         Yes           No         X		, , , ,	on and wetl	land hydrology mi	ust be pr	esent, ur	nless dist	urbed or problematic.		
Depth (inches): 3 Hydric Soil Present? Yes No X		,								
	Type:	Root	S							
Remarks:	Depth (ii	nches):	3					Hydric Soil Present?	Yes	No X
	Remarks:							-		

Project/Site: Laurel Lakes	City/County: Hudson/Summit Sampling Date: 06/23/2022					
Applicant/Owner: RDL Architects	State: OH Sampling Point: 5					
Investigator(s): Emily Nagle, Lindsey Jakovljevic	Section, Township, Range:					
	relief (concave, convex, none): Flat Slope %: 4					
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.242023°	Long: -81.474099° Datum: NAD 83					
Soil Map Unit Name: CcB	NWI classification:					
Are climatic / hydrologic conditions on the site typical for this time of year?						
, ,	<u> </u>					
Are Vegetation N, Soil N, or Hydrology N significantly disturb	<del></del>					
Are Vegetation N, Soil N, or Hydrology N naturally problems	atic? (If needed, explain any answers in Remarks.)					
<b>SUMMARY OF FINDINGS – Attach site map showing sam</b>	pling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area					
Hydric Soil Present?  Yes X No	within a Wetland? Yes X No					
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: W-S					
Remarks: (Explain alternative procedures here or in a separate report.)						
Tromaine. (Explain alternative procedures here of in a coparate reports)						
HYDROLOGY						
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)					
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)					
Surface Water (A1) Water-Stained Leaves (E						
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)					
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)					
Water Marks (B1)  Hydrogen Sulfide Odor (						
Sediment Deposits (B2) Oxidized Rhizospheres of the control of the						
Drift Deposits (B3) Presence of Reduced Iro						
Algal Mat or Crust (B4)  Recent Iron Reduction in						
Iron Deposits (B5)  Thin Muck Surface (C7)						
X Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar						
Sparsely Vegetated Concave Surface (B8)	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? Yes X No Depth (inches):	:					
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	avious inspections) if available:					
Describe Necorded Data (stream gauge, monitoring well, aerial priotos, pre	inspections), if available.					
Remarks:						

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test workshee	g Point:		
Fraxinus pennsylvanica	70 COVE	Yes	FACW				
2				Number of Dominant Specie That Are OBL, FACW, or FA		2	(A)
3 4				Total Number of Dominant Species Across All Strata:		2	_(B)
5. 6.				Percent of Dominant Specie That Are OBL, FACW, or FA		00.0%	(A/E
7.				Prevalence Index workshe	et:		
		=Total Cover		Total % Cover of:	Mu	ıltiply by:	
Sapling/Shrub Stratum (Plot size:)				OBL species 10	x 1 =	10	
1				FACW species 95	x 2 =	190	
2.				FAC species 5	x 3 =	15	
3.		·		FACU species 0	x 4 =	0	
1.		· · · · · · · · · · · · · · · · · · ·		UPL species 0	x 5 =	0	
5.				Column Totals: 110	-	215	(
S				Prevalence Index = I	B/A =	1.95	
7.				Hydrophytic Vegetation In	dicators:		
		=Total Cover		1 - Rapid Test for Hydro	phytic Ve	getation	
Herb Stratum (Plot size:)				X 2 - Dominance Test is >	50%		
1. Phalaris arundinacea	85	Yes	FACW	X 3 - Prevalence Index is	≤3.0 <sup>1</sup>		
2. Juncus effusus	10	No	OBL	4 - Morphological Adapt			
3. Toxicodendron radicans	5	No	FAC	data in Remarks or o	n a separa	ate sheet)	)
4.				Problematic Hydrophytic	C Vegetation	on¹ (Expla	ain)
5 6				<sup>1</sup> Indicators of hydric soil and be present, unless disturbed			mus
7				Definitions of Vegetation S	Strata:		
8 9.				Tree – Woody plants 3 in. (7 diameter at breast height (D			heiah
10.				Sapling/shrub – Woody pla	nts less th	nan 3 in. [	_
11				and greater than or equal to	3.28 II (1	m) tall.	
12		=Total Cover		<b>Herb</b> – All herbaceous (nonof size, and woody plants le			ardle
Woody Vine Stratum (Plot size:)  1				<b>Woody vines</b> – All woody v height.	ines great	er than 3.	.28 ft
2.							
3.				Hydrophytic Vegetation			
4.				Present? Yes X	No		
		=Total Cover			-		

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Depth	cription: (Describe t Matrix	to the de	-	ı <b>ment ti</b> < Featur		ator or co	onfirm the absence of	f indicators.)		
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
0-8	10YR 2/1	80	10YR 5/8	20	С	M	Loamy/Clayey	Prominent redox concentrations		
8-20	10YR 3/1	70	10YR 6/1	15	С	PL/M	Loamy/Clayey	Distinct redox concentrations		
			7.5YR 5/6	15	<u>C</u>	PL		Prominent redox concentrations		
							<u> </u>			
	·									
	oncentration, D=Dep	letion, RN	M=Reduced Matrix, M	1S=Mas	ked San	d Grains.		L=Pore Lining, M=Matrix.		
Hydric Soil Histosol			Polyvalue Belo	w Surfa	co (S8) (	IDDD		or Problematic Hydric Soils <sup>3</sup> : ck (A10) (LRR K, L, MLRA 149B)		
	pipedon (A2)		MLRA 149B)		ce (30) (	LIXIX IX,		rairie Redox (A16) (LRR K, L, R)		
	istic (A3)		Thin Dark Surfa		(LRR R	, MLRA		cky Peat or Peat (S3) (LRR K, L, R)		
	en Sulfide (A4)		High Chroma S				· —	e Below Surface (S8) (LRR K, L)		
Stratified	d Layers (A5)		Loamy Mucky I	Mineral	(F1) ( <b>LR</b>	R K, L)	Thin Dar	k Surface (S9) ( <b>LRR K, L</b> )		
Deplete	d Below Dark Surface	e (A11)	Loamy Gleyed	Matrix (	F2)		Iron-Manganese Masses (F12) (LRR K, L, R)			
Thick Da	ark Surface (A12)		Depleted Matrix				Piedmon	t Floodplain Soils (F19) (MLRA 149B)		
	lucky Mineral (S1)		X Redox Dark Su					podic (TA6) ( <b>MLRA 144A, 145, 149B</b> )		
	Gleyed Matrix (S4)		Depleted Dark				Red Parent Material (F21)			
	Redox (S5)		Redox Depress		8)		Very Shallow Dark Surface (F22)			
	Matrix (S6)		Marl (F10) ( <b>LR</b> l	R K, L)			Other (Explain in Remarks)			
Dark Su	rface (S7)									
<sup>3</sup> Indicators o	f hydrophytic vegetat	ion and v	vetland hydrology mu	ıst be pı	resent, u	nless dist	turbed or problematic.			
Restrictive	Layer (if observed):									
Type:										
Depth (i	nches):						Hydric Soil Preser	nt? Yes <u>χ</u> No		
Remarks:										

Project/Site: Laurel Lakes	City/County: Hudson/Summit Sampling Date: 06/23/2022						
Applicant/Owner: RDL Architects	State: OH Sampling Point: 6						
Investigator(s): Emily Nagle, Lindsey Jakovljevic	Section, Township, Range:						
Landform (hillside, terrace, etc.): Depression Local	I relief (concave, convex, none): Concave Slope %: 1						
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.242674°	Long: -81.474099° Datum: NAD 83						
Soil Map Unit Name: Sb	NWI classification:						
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)						
Are Vegetation N , Soil N , or Hydrology N significantly distur	· · · · · · · · · · · · · · · ·						
Are Vegetation N , Soil N , or Hydrology N naturally problem	<del></del>						
	npling point locations, transects, important features, etc.						
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area						
Hydric Soil Present?  Yes X No	within a Wetland? Yes X No						
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: W-U						
Remarks: (Explain alternative procedures here or in a separate report.)	<del></del>						
HYDROLOGY							
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)						
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)						
Surface Water (A1)  X Water-Stained Leaves (							
X High Water Table (A2)  Aquatic Fauna (B13)	Moss Trim Lines (B16)						
X Saturation (A3)Marl Deposits (B15)	Dry-Season Water Table (C2)						
X Water Marks (B1) Hydrogen Sulfide Odor	<u> </u>						
Sediment Deposits (B2)  Oxidized Rhizospheres  Prospect of Reduced In							
Drift Deposits (B3) Presence of Reduced Ir  Algal Mat or Crust (B4) Recent Iron Reduction i							
Iron Deposits (B5)  Recent from Reduction 1  Thin Muck Surface (C7)							
Inundation Visible on Aerial Imagery (B7)  Other (Explain in Rema							
X Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)						
X Sparsely Vegetated Concave Surface (B8)  X FAC-Neutral Test (D5)  Field Observations:							
Surface Water Present? Yes No X Depth (inches)	):						
Water Table Present? Yes X No Depth (inches)	<del></del>						
Saturation Present? Yes X No Depth (inches)							
(includes capillary fringe)							
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pro	revious inspections), if available:						
Remarks:							

<b>VEGETATION</b> – Use scientific names of plants.	Sampling Point:
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<u>Tree Stratum</u> (Plot size: )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Acer rubrum	45	Yes	FAC	
Quercus palustris	25	Yes	FACW	Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
3. Ulmus americana	10	No	FACW	
4.				Total Number of Dominant Species Across All Strata: 5 (B)
5.				
6				Percent of Dominant Species That Are OBL, FACW, or FAC: 80.0% (A/B)
7				Prevalence Index worksheet:
	80	=Total Cover	-	Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: )				OBL species 30 x 1 = 30
1.				FACW species 60 x 2 = 120
2.				FAC species 65 x 3 = 195
3.				FACU species 25 x 4 = 100
4.				UPL species 0 x 5 = 0
5.				Column Totals: 180 (A) 445 (B)
6.				Prevalence Index = B/A = 2.47
7.				Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size:)				X 2 - Dominance Test is >50%
1. Phalaris arundinacea	25	Yes	FACW	X 3 - Prevalence Index is ≤3.0 <sup>1</sup>
2. Juncus effusus	10	No	OBL	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
3. Carex lupulina	20	Yes	OBL	data in Remarks or on a separate sheet)
4. Juncus tenuis	10	No	FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5. Solidago rugosa	10	No	FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
6. Phleum pratense	25	Yes	FACU	be present, unless disturbed or problematic.
7.				Definitions of Vegetation Strata:
8.				Tree – Woody plants 3 in. (7.6 cm) or more in
9				diameter at breast height (DBH), regardless of height.
10.				Sapling/shrub – Woody plants less than 3 in. DBH
11				and greater than or equal to 3.28 ft (1 m) tall.
12				Herb – All herbaceous (non-woody) plants, regardless
	100	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines greater than 3.28 ft in
1				height.
2.				
3.				Hydrophytic Vegetation
4				Present? Yes X No No
		=Total Cover		
Remarks: (Include photo numbers here or on a sepa	rate sheet.)			

6

Profile Desc Depth	cription: (Describe to Matrix	to the de	-	<b>ument tl</b> x Featur		ator or c	onfirm the absence of	indicators.)		
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
0-5	10YR 2/1	100					Muck			
5-18	10YR 5/1	90	10YR 6/8	10		PL/M	Mucky Loam/Clay	Prominent redox concentrations		
					<u> </u>	<u>,</u>				
·										
1 <sub>Tympo</sub> , C. C.	anaontration D. Donl	lotion DA	A Doduced Metrix N		lead Can	d Crains	2l acation, DI	_=Pore Lining, M=Matrix.		
Hydric Soil	oncentration, D=Depl	etion, Riv	/I=Reduced Matrix, N	/IS=IVIAS	ked San	d Grains		_=Pore Lining, M=Matrix. or Problematic Hydric Soils <sup>3</sup> :		
Histosol			Polyvalue Belo	w Surfa	ce (S8) (	LRR R.		ck (A10) (LRR K, L, MLRA 149B)		
	pipedon (A2)		MLRA 149B		00 (00) (	,		airie Redox (A16) (LRR K, L, R)		
Black Hi			Thin Dark Surf	•	(LRR R	, MLRA		cky Peat or Peat (S3) (LRR K, L, R)		
Hydroge	n Sulfide (A4)		High Chroma S	Sands (S	611) ( <b>LR</b> I	R K, L)	Polyvalue	e Below Surface (S8) (LRR K, L)		
Stratified	d Layers (A5)		Loamy Mucky	Mineral	(F1) ( <b>LR</b>	R K, L)	Thin Dark	k Surface (S9) (LRR K, L)		
X Depleted	d Below Dark Surface	(A11)	Loamy Gleyed	Matrix (	F2)		Iron-Manganese Masses (F12) (LRR K, L, R)			
	ark Surface (A12)		Depleted Matri					t Floodplain Soils (F19) (MLRA 149B)		
	fucky Mineral (S1)		Redox Dark Su					odic (TA6) (MLRA 144A, 145, 149B)		
	Gleyed Matrix (S4)		Depleted Dark Redox Depress					ent Material (F21)		
	ledox (S5) Matrix (S6)		Marl (F10) (LR		0)		Very Shallow Dark Surface (F22) Other (Explain in Remarks)			
	rface (S7)		Wan (i 10) ( <b>Lik</b>	IX IX, L)				tplant in Nemarks)		
<sup>3</sup> Indicators of	f hydrophytic vegetat	ion and v	vetland hydrology mu	ust be pi	resent, u	nless dis	turbed or problematic.			
Restrictive I	Layer (if observed):									
Type:										
Depth (ir	nches):						Hydric Soil Presen	t? Yes <u>x</u> No		
Remarks:							<u> </u>	_		
Top 2 inches	is organic material									

Project/Site: Laurel Lakes	City/County: Hudson/Summit Sampling Date: 06/23/2022
Applicant/Owner: RDL Architects	State: OH Sampling Point: 7
Investigator(s): Emily Nagle, Lindsey Jakovljevic	Section, Township, Range:
Landform (hillside, terrace, etc.): scrub Local	relief (concave, convex, none): Concave Slope %: 2
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.243183°	Long: -81.467144° Datum: NAD 83
Soil Map Unit Name: Sb	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation N , Soil N , or Hydrology N significantly distur	
	<u> </u>
Are Vegetation N, Soil N, or Hydrology N naturally problems	
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: W-U
Remarks: (Explain alternative procedures here or in a separate report.)	
Tremarks. (Explain alternative procedures here of in a separate report.)	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)  X Water-Stained Leaves (I	
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
X Water Marks (B1) Hydrogen Sulfide Odor (	
Sediment Deposits (B2) Oxidized Rhizospheres	
Drift Deposits (B3) Presence of Reduced Iro	
Algal Mat or Crust (B4)  Recent Iron Reduction ir	· · · · · · · · · · · · · · · · · · ·
Iron Deposits (B5) Thin Muck Surface (C7)	
Inundation Visible on Aerial Imagery (B7)Other (Explain in Remar	
X Sparsely Vegetated Concave Surface (B8)	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? Yes X No Depth (inches):	: 2 Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
Remarks:	

	Absolute	Dominant	Indicator	T		-	7	
ree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test	t worksheet:			
				Number of Domir That Are OBL, F		: <u> </u>	3	_ (A)
	<u> </u>			Total Number of Species Across A			3	(B)
				Percent of Domir That Are OBL, F	•	: <u>1</u>	00.0%	(A/E
				Prevalence Inde	x worksheet	:		
		=Total Cover		Total % Co	ver of:	Mu	ıltiply by:	
pling/Shrub Stratum (Plot size:	)			OBL species	20	x 1 =	20	
Fraxinus pennsylvanica	50	Yes	FACW	FACW species	110	x 2 =	220	
Rhamnus alnifolia	20	Yes	OBL	FAC species	15	x 3 =	45	
Lonicera maackii	5	No	UPL	FACU species	0	x 4 =	0	
				UPL species	5	x 5 =	25	
				Column Totals:	150	(A)	310	(I
				Prevalenc	e Index = B/	A =	2.07	
				Hydrophytic Ve	getation Indi	cators:		
	75	=Total Cover		1 - Rapid Te	st for Hydroph	nytic Ve	getation	
rb Stratum (Plot size:)				X 2 - Dominano	ce Test is >50	)%		
Lysimachia nummularia	60	Yes	FACW	X 3 - Prevalend	ce Index is ≤3	.0 <sup>1</sup>		
Toxicodendron radicans	10	No	FAC	4 - Morpholo	-			
Persicaria virginiana	5	No	FAC	data in Re	marks or on a	a separa	ate sheet	)
				Problematic	Hydrophytic \	/egetation	on¹ (Expl	ain)
				<sup>1</sup> Indicators of hydbe present, unles				/ mus
				Definitions of Vo	egetation Str	ata:		
				Tree – Woody pla				heigh
				Sapling/shrub – and greater than				DBH
·				Herb – All herba	ceous (non-w	oody) pl	ants, reg	jardle
1 Nr. O (D)		=Total Cover		of size, and wood	ay piants iess	than 3.2	28 IT TAII.	
oody Vine Stratum (Plot size:				Woody vines – / height.	All woody vine	es great	er than 3	.28 ft
				Hydrophytic				
				Vegetation				
				Present?	Yes X	No		
		=Total Cover						

SOIL Sampling Point \_\_\_\_\_\_7

(inches) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks  0-18 10YR 3/1 90 7.5YR 4/3 10 C M Mucky Loam/Clay Distinct redox concentrations    Nucley Loam/Clay   Distinct redox concentrations	Depth	Matrix		Redo	x Featur				
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.  Hydric Soil Indicators: Histosol (A1) Histosol (A2) Histic Epipedon (A2) Histosol (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Hydrogen Sulfide (A4) High Chroma Sands (S11) (LRR K, L) Polyvalue Below Surface (S9) (LRR R, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Hydrogen Sulfide (A4) High Chroma Sands (S11) (LRR K, L) Polyvalue Below Surface (S9) (LRR R, MLRA 149B) Hydrogen Sulfide (A4) High Chroma Sands (S11) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (A11) Loamy Mucky Mineral (F1) (LRR K, L) Thick Dark Surface (A12) Depleted Matrix (F3) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F6) Mesic Spodic (TA6) (MLRA 144A, 145, 149B, 14B, 149B, 14	(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histosol (A2) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thick Dark Surface (A12) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F6) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Marl (F10) (LRR K, L) Marl (F10) (LRR K, L) Marl (F10) (LRR K, L)  Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L)  Polyvalue Below Surface (S8) (LRR K, L, R) Polyvalue Below Surface (S8) (LRR K, L, R) Thin Dark Surface (S9) (LRR K, L)  Depleted Below Dark Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Polyvalue Below Surface (S9) (LRR K, L, R) Polyvalue Below Surface (S9) (LRR K, L, R) Polyvalue Below Surface (S9) (LRR K, L, R) Polyvalue Below (S9) (LRR K, L, R) Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R) Polyvalue Below Surface (S9) (LRR K, L, R) Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L)  Polyvalue Below Su	0-18	10YR 3/1	90	7.5YR 4/3	10	С	M	Mucky Loam/Clay	Distinct redox concentrations
Hydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R, Histosol (A2)  MLRA 149B)  Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2)  MLRA 149B)  Doard Surface (S9) (LRR R, MLRA 149B)  Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A11)  Sandy Mucky Mineral (F1) (LRR K, L)  Depleted Below Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Redox Depressions (F8)  Stripped Matrix (S6)  Marl (F10) (LRR K, L)  Depleted Dark Surface (F22)  Stripped Matrix (S6)  Marl (F10) (LRR K, L)  Polyvalue Below Surface (S9) (LRR K, L)  Polyvalue Below Surface (S8) (LRR K, L)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S8) (LRR K, L, R)  Polyvalue Below Surface (S8) (LRR K, L, R)  Polyvalue Below Surface (S8) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L)  Polyvalue Surface (S9) (LRR K, L)									
Hydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2)  MLRA 149B)  Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2)  MLRA 149B)  Doard Surface (S9) (LRR R, MLRA 149B)  Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A11)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Redox Depressions (F8)  Stripped Matrix (S6)  Dark Surface (S7)  Polyvalue Below Surface (H22)  Depleted Matrix (F3)  Piedmont Floodplain Soils (F19) (MLRA 149B)  Sandy Redox (S5)  Redox Depressions (F8)  Very Shallow Dark Surface (F22)  Stripped Matrix (S6)  Marl (F10) (LRR K, L)  Other (Explain in Remarks)  Pindicators 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	-	-							
Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histosol (A2) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thick Dark Surface (A12) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F6) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Marl (F10) (LRR K, L) Marl (F10) (LRR K, L) Marl (F10) (LRR K, L)  Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L)  Polyvalue Below Surface (S8) (LRR K, L, R) Polyvalue Below Surface (S8) (LRR K, L, R) Thin Dark Surface (S9) (LRR K, L)  Depleted Below Dark Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Polyvalue Below Surface (S9) (LRR K, L, R) Polyvalue Below Surface (S9) (LRR K, L, R) Polyvalue Below Surface (S9) (LRR K, L, R) Polyvalue Below (S9) (LRR K, L, R) Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R) Polyvalue Below Surface (S9) (LRR K, L, R) Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L)  Polyvalue Below Su									
Hydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2)  MLRA 149B)  Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2)  MLRA 149B)  Doard Surface (S9) (LRR R, MLRA 149B)  Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A11)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Redox Depressions (F8)  Stripped Matrix (S6)  Dark Surface (S7)  Polyvalue Below Surface (H22)  Depleted Matrix (F3)  Piedmont Floodplain Soils (F19) (MLRA 149B)  Sandy Redox (S5)  Redox Depressions (F8)  Very Shallow Dark Surface (F22)  Stripped Matrix (S6)  Marl (F10) (LRR K, L)  Other (Explain in Remarks)  Pindicators 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									
Hydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2)  MLRA 149B)  Polyvalue Below Surface (S9) (LRR R, Histic Epipedon (A2)  MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, R)  Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Redox Depressions (F8)  Stripped Matrix (S6)  Dark Surface (S7)  Bridicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Indicators for Problematic Hydric Soil Present?  2 cm Muck (A10) (LRR K, L, MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, R)  2 cm Muck (A10) (LRR K, L, R)  Coast Prairie Redox (A16) (LRR K, L, R)  2 cm Muck (A10) (LRR K, L, R)  Coast Prairie Redox (A16) (LRR K, L, R)  5 cm Mucky Peat or Peat (S3) (LRR K, L, R)  Foundative Redox (A16) (LRR K, L, R)  Follows Alexa (S8) (LRR K, L, R)  Follows Alexa (S8) (LRR K, L, R)  Follows Alexa (S9) (LRR K, L, R)  Follows Alexa (S9) (LRR K, L, R)  Follows Alexa (S9) (LRR K, L, R)  Follows Below Surface (S9) (LRR K, L, R)  Follows Alexa (S9) (LRR K, L)  Follows Alexa (S9) (LRR K, L)  Follows Alexa (S9) (LRR K, L)  Follows Alexa (S9) (LRR K,									
Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histosol (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thick Dark Surface (A12) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F6) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Marl (F10) (LRR K, L) Deresents of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Hidicators for Problematic Hydric Soil Present?  2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Coast Prairie Redox (A16) Coast Prairie Redox (A10) Coast Prairie Redox (A10) Coast Paul Cast R, L, R) Coast Paul Cast R, L, R) Coast Paul Cast R,									
Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histosol (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thick Dark Surface (A12) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F6) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Marl (F10) (LRR K, L) Deresents of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Hidicators for Problematic Hydric Soil Present?  2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Coast Prairie Redox (A16) Coast Prairie Redox (A10) Coast Prairie Redox (A10) Coast Paul Cast R, L, R) Coast Paul Cast R, L, R) Coast Paul Cast R,									
Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histosol (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thick Dark Surface (A12) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F6) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Marl (F10) (LRR K, L) Deresents of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Hidicators for Problematic Hydric Soil Present?  2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Coast Prairie Redox (A16) Coast Prairie Redox (A10) Coast Prairie Redox (A10) Coast Paul Cast R, L, R) Coast Paul Cast R, L, R) Coast Paul Cast R,									
Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histosol (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thick Dark Surface (A12) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F6) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Marl (F10) (LRR K, L) Deresents of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Hidicators for Problematic Hydric Soil Present?  2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Coast Prairie Redox (A16) Coast Prairie Redox (A10) Coast Prairie Redox (A10) Coast Paul Cast R, L, R) Coast Paul Cast R, L, R) Coast Paul Cast R,									
Hydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2)  MLRA 149B)  Polyvalue Below Surface (S9) (LRR R, Histic Epipedon (A2)  MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, R)  Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Redox Depressions (F8)  Stripped Matrix (S6)  Dark Surface (S7)  Bridicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Indicators for Problematic Hydric Soil Present?  2 cm Muck (A10) (LRR K, L, MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, R)  2 cm Muck (A10) (LRR K, L, R)  Coast Prairie Redox (A16) (LRR K, L, R)  2 cm Muck (A10) (LRR K, L, R)  Coast Prairie Redox (A16) (LRR K, L, R)  5 cm Mucky Peat or Peat (S3) (LRR K, L, R)  Foundative Redox (A16) (LRR K, L, R)  Follows Alexa (S8) (LRR K, L, R)  Follows Alexa (S8) (LRR K, L, R)  Follows Alexa (S9) (LRR K, L, R)  Follows Alexa (S9) (LRR K, L, R)  Follows Alexa (S9) (LRR K, L, R)  Follows Below Surface (S9) (LRR K, L, R)  Follows Alexa (S9) (LRR K, L)  Follows Alexa (S9) (LRR K, L)  Follows Alexa (S9) (LRR K, L)  Follows Alexa (S9) (LRR K,									
Hydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histosol (A2) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thick Dark Surface (A12) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F6) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Marl (F10) (LRR K, L) Marl (F10) (LRR K, L) Marl (F10) (LRR K, L)  Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L)  Polyvalue Below Surface (S8) (LRR K, L, R) Polyvalue Below Surface (S8) (LRR K, L, R) Thin Dark Surface (S9) (LRR K, L)  Depleted Below Dark Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Polyvalue Below Surface (S9) (LRR K, L, R) Polyvalue Below Surface (S9) (LRR K, L, R) Polyvalue Below Surface (S9) (LRR K, L, R) Polyvalue Below (S9) (LRR K, L, R) Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R) Polyvalue Below Surface (S9) (LRR K, L, R) Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L)  Polyvalue Below Su									
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Histosol (A1)			etion, RN	M=Reduced Matrix, N	иS=Mas	ked San	d Grains		
Histic Epipedon (A2)  MIRA 149B)  Coast Prairie Redox (A16) (LRR K, L, R)  Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A11)  Depleted Matrix (F2)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Depleted Dark Surface (F22)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Depleted Dark Surface (F7)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Marl (F10) (LRR K, L)  Hydric Soil Present?  Mesic Spodic (A16) (LRR K, L, R)  5 cm Mucky Peat or Peat (S3) (LRR K, L, R)  5 cm Mucky Peat or Peat (S3) (LRR K, L, R)  5 cm Mucky Peat or Peat (S3) (LRR K, L, R)  5 cm Mucky Peat or Peat (S3) (LRR K, L, R)  5 cm Mucky Peat or Peat (S3) (LRR K, L, R)  5 cm Mucky Peat or Peat (S3) (LRR K, L, R)  5 cm Mucky Peat or Peat (S3) (LRR K, L, R)  7 billorate (S9) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L, R)  Thin Dark Surface (S9) (LRR K, L)  Diron-Manganese Masses (F12) (LRR K, L, R)  Polyvalue Below Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Polyvalue Below Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Polyvalue Below Surface (S9) (LRR K, L)  Polyvalue Below Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Polyvalue Below Surface (S9) (LRR K, L)  Polyvalue Below Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Polyvalue Below Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LR K, L)  Thin Dark Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Thin Dark Surfac	-			Daharaha Dala	0	(00) (			· · · · · · · · · · · · · · · · · · ·
Black Histic (A3)						ce (58) (	LKK K,		
Hydrogen Sulfide (A4)  High Chroma Sands (S11) (LRR K, L)  Stratified Layers (A5)  Loamy Mucky Mineral (F1) (LRR K, L)  Depleted Below Dark Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Depleted Below Dark Surface (A11)  Loamy Gleyed Matrix (F2)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Redox Depressions (F8)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Other (Explain in Remarks)  Polyvalue Below Surface (S8) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Iron-Manganese Masses (F12) (LRR K, L, R)  Piedmont Floodplain Soils (F19) (MLRA 149I  Mesic Spodic (TA6) (MLRA 144A, 145, 149B  Mesic Spodic (TA6) (MLRA 149I  Mesic Spodic (TA6) (MLRA 1					•	(IRR R	MIRΔ		
Stratified Layers (A5)  Loamy Mucky Mineral (F1) (LRR K, L)  Depleted Below Dark Surface (A11)  Loamy Gleyed Matrix (F2)  Thick Dark Surface (A12)  Depleted Matrix (F3)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Redox Depressions (F8)  Stripped Matrix (S6)  Dark Surface (S9) (LRR K, L, R)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B  Mesic Spodic (TA6) (MLRA 144B, 149B  Mesic Spodic (TA6) (MLRA 149B  Mesic Spodic (TA									
Depleted Below Dark Surface (A11)  Loamy Gleyed Matrix (F2)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F7)  Sandy Redox (S5)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Dark Surface (F22)  Other (Explain in Remarks)  Piedmont Floodplain Soils (F19) (MLRA 149I Mesic Spodic (TA6) (MLRA 144A, 145, 149I Mesic Spodic (TA6) (MLRA							-		
Sandy Mucky Mineral (S1) X Redox Dark Surface (F6) Mesic Spodic (TA6) (MLRA 144A, 145, 149B Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Red Parent Material (F21) Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (F22) Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks) Dark Surface (S7)  3Indicators 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			(A11)				, ,		
Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F7)  Red Parent Material (F21)  Very Shallow Dark Surface (F22)  Stripped Matrix (S6)  Dark Surface (S7)  And (F10) (LRR K, L)  Dark Surface (S7)  All (F10) (LRR K, L)  Dark Surface (S7)  All (F10) (LRR K, L)  Dark Surface (S7)  Bresent, unless disturbed or problematic.  Restrictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present?  Yes X No	Thick Da	ark Surface (A12)		Depleted Matri	x (F3)			Piedmont Fl	oodplain Soils (F19) (MLRA 149E
Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (F22) Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks)  Dark Surface (S7)  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	Sandy M	lucky Mineral (S1)		X Redox Dark Si	urface (F	6)		Mesic Spodi	c (TA6) (MLRA 144A, 145, 149B)
Stripped Matrix (S6)									
Dark Surface (S7)  3Indicators 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		` '				8)			
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		` ,		Marl (F10) ( <b>LR</b>	R K, L)			Other (Expla	iin in Remarks)
Restrictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present?  Yes X No	Dark Sur	rface (S7)							
Restrictive Layer (if observed):  Type:  Depth (inches):  Hydric Soil Present?  Yes X No	<sup>3</sup> Indicators of	f hydronhytic vegetatic	on and w	wetland hydrology m	uet ha nr	ecent III	nlace die	turbed or problematic	
Type:			JII and v	vetiana nyarology m	ust be pi	CSCIII, U	ilicoo dio	Turbed or problematic.	
Depth (inches): Hydric Soil Present? Yes X No									
	•	iches).						Hydric Soil Present?	Yes X No
Remarks:				<u> </u>				Try and con thosein.	<u> </u>
	Remarks:								

Project/Site: Laurel Lakes	City/County: Hudson/Summit Sampling Date: 06/23/2022
Applicant/Owner: RDL Architects	State: OH Sampling Point: 8
Investigator(s): Emily Nagle, Lindsey Jakovljevic	Section, Township, Range:
	relief (concave, convex, none): convex Slope %: 10
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.242582°	Long: -81.466804° Datum: NAD 83
Soil Map Unit Name: CcB	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N significantly distur-	
Are Vegetation N, Soil N, or Hydrology N naturally problems	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydric Soil Present? Yes No X	within a Wetland? Yes No X
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (	
High Water Table (A2)  Aquatic Fauna (B13)  And Banasite (B45)	Moss Trim Lines (B16)
Saturation (A3)  Marl Deposits (B15)  Water Marks (B1)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (	
Sediment Deposits (B2)  Drift Deposits (B3)  Oxidized Rhizospheres  Presence of Reduced In	
<u> </u>	<u> </u>
Algal Mat or Crust (B4)  Iron Deposits (B5)  Recent Iron Reduction in Thin Muck Surface (C7)	
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Other (Explain in Remark)	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
<del></del>	( AO-Neuliai Test (D3)
Field Observations: Surface Water Present? Yes No X Depth (inches):	
<u> </u>	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	: Wetland Hydrology Present? Yes No _X
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections) if available:
Describe Necorded Data (Stream gauge, monitoring well, actial priotos, pre	evious inspections), ii available.
Remarks:	

VEGETATION – Use scientific names of plants.			Sampling Point:	8
Abaduta	Dominant	Indicator		

<u>Tree Stratum</u> (Plot size:)	% Cover	Species?	Status	Dominance Test worksheet:
1. Acer rubrum	60	Yes	FAC	Number of Dominant Species
2.				That Are OBL, FACW, or FAC:3 (A)
3.				Total Number of Dominant
4				Species Across All Strata: 5 (B)
5				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 60.0% (A/B)
7				Prevalence Index worksheet:
	60	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:)				OBL species 60 x 1 = 60
1. Rhamnus alnifolia	45	Yes	OBL	FACW species 5 x 2 = 10
2.				FAC species 75 x 3 = 225
3.				FACU species 45 x 4 = 180
4		<u> </u>		UPL species 0 x 5 = 0
5				Column Totals: 185 (A) 475 (B)
6.				Prevalence Index = B/A = 2.57
7				Hydrophytic Vegetation Indicators:
	45	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size:)				X 2 - Dominance Test is >50%
1. Rhamnus alnifolia	15	Yes	OBL	X 3 - Prevalence Index is ≤3.0 <sup>1</sup>
2. Anthoxanthum odoratum	15	Yes	FACU	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
3. Solidago rugosa	10	No	FAC	data in Remarks or on a separate sheet)
4. Poa pratensis	30	Yes	FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5. Geum macrophyllum	5	No	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
6. Toxicodendron radicans	5	No	FAC	be present, unless disturbed or problematic.
7.				Definitions of Vegetation Strata:
8.				Tree – Woody plants 3 in. (7.6 cm) or more in
9.				diameter at breast height (DBH), regardless of height.
10.				Sapling/shrub – Woody plants less than 3 in. DBH
11.				and greater than or equal to 3.28 ft (1 m) tall.
12.				Herb – All herbaceous (non-woody) plants, regardless
	80	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size:)				Weedington Allowed horizon are store their 2 20 ft in
1.				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
2.				
3.				Hydrophytic
4.				Vegetation Present? Yes X No
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)	•		
` '	,			

0-8 10YR	4/4 100		% Type¹ Loc²	Loamy/Clayey	
	, D=Depletion, RM	I=Reduced Matrix, M	S=Masked Sand Grains.	<sup>2</sup> Location: PL=Pore	e Lining, M=Matrix.
Hydric Soil Indicators:					olematic Hydric Soils <sup>3</sup> :
Histosol (A1)		<del></del> ·	w Surface (S8) (LRR R,		0) (LRR K, L, MLRA 149B)
Histic Epipedon (A2)		MLRA 149B)			edox (A16) (LRR K, L, R)
Black Histic (A3) Hydrogen Sulfide (A	4)		ace (S9) ( <b>LRR R, MLRA</b> 1 ands (S11) ( <b>LRR K, L)</b>		eat or Peat (S3) (LRR K, L, R) w Surface (S8) (LRR K, L)
Stratified Layers (A5			Mineral (F1) (LRR K, L)		ace (S9) (LRR K, L)
Depleted Below Dar		Loamy Gleyed I			e Masses (F12) (LRR K, L, R)
Thick Dark Surface		Depleted Matrix			dplain Soils (F19) (MLRA 149B)
Sandy Mucky Minera		Redox Dark Su			TA6) ( <b>MLRA 144A, 145, 149B</b> )
Sandy Gleyed Matrix	(S4)	Depleted Dark S	Surface (F7)	Red Parent Ma	terial (F21)
Sandy Redox (S5)		Redox Depress	ions (F8)	Very Shallow D	ark Surface (F22)
Stripped Matrix (S6)		Marl (F10) ( <b>LRF</b>	₹ K, L)	Other (Explain i	in Remarks)
Dark Surface (S7)					
3					
		etiand hydrology mu	st be present, unless dist	turbed or problematic.	
Restrictive Layer (if ob Type:	Roots				
-				Undela Oall Bossessio	V N- V
Depth (inches):	8			Hydric Soil Present?	Yes No _X

Project/Site: Laurel Lakes	City/County: Hudson/Summit Sampling Date: 06/23/2022
Applicant/Owner: RDL Architects	State: OH Sampling Point: 9
Investigator(s): Emily Nagle, Lindsey Jakovljevic	Section, Township, Range:
	relief (concave, convex, none): Concave Slope %: 2
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.244483°	Long: -81.467878° Datum: NAD 83
Soil Map Unit Name: GbC2	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N significantly disturb	<del></del>
Are Vegetation N, Soil N, or Hydrology N naturally problems	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, transects, important features, etc.
Lhidraphitia Variation Procent?	Is the Sampled Area
Hydrophytic Vegetation Present?  Yes X No Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present?  Yes X No	If yes, optional Wetland Site ID: Stormwater Basin 1
Remarks: (Explain alternative procedures here or in a separate report.)	
Tremains. (Explain alternative procedures here of in a separate report.)	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) X Water-Stained Leaves (E	
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) — Marl Deposits (B15)	Dry-Season Water Table (C2)
X Water Marks (B1) Hydrogen Sulfide Odor (	
Sediment Deposits (B2) Oxidized Rhizospheres of the control of the	
Drift Deposits (B3) Presence of Reduced Iro	
Algal Mat or Crust (B4)  Recent Iron Reduction in  This Much Carfora (O7)	
Iron Deposits (B5)  Thin Muck Surface (C7)  Valuate in Visible on Assist Imagen (B7)  Other (Fynlein in Remove	
X Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar Sparsely Vegetated Concave Surface (B8)	rks) X Microtopographic Relief (D4) X FAC-Neutral Test (D5)
	A FAC-Neutral Test (D3)
Field Observations:	
Surface Water Present? Yes No X Depth (inches):  Water Table Present? Yes No X Depth (inches):	
Saturation Present? Yes X No Depth (inches):	
(includes capillary fringe)	Welland Hydrology Fresent: Fes A No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
	, ,,
Remarks:	

ree Stratum (Plot size: )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Tes	t worksheet:	:		
	_			Number of Domir				
				That Are OBL, F	ACW, or FAC	): 	1	_(A)
				Total Number of Species Across A			1	_(B)
				Percent of Domir That Are OBL, FA			00.0%	(A/B)
				Prevalence Inde		_		<u>-` ´</u>
		=Total Cover		Total % Co	ver of:	Mu	Itiply by:	
pling/Shrub Stratum (Plot size:	)			OBL species	0	x 1 =	0	
				FACW species	95	x 2 =	190	
				FAC species				
				FACU species		_		
				UPL species		_		
				Column Totals:	99	(A)	202	— (B)
				_	e Index = B/	_		
				Hydrophytic Ve	getation Indi	icators:		
		=Total Cover		1 - Rapid Te	st for Hydrop	hytic Veg	etation	
erb Stratum (Plot size:)				X 2 - Dominano	ce Test is >50	0%		
Phalaris arundinacea	95	Yes	FACW	X 3 - Prevalence	ce Index is ≤3	3.0 <sup>1</sup>		
Solidago rugosa	2	No	FAC	4 - Morpholo	gical Adaptat	tions¹ (Pr	ovide su	pporting
Urtica dioica			FAC	data in Re	marks or on	a separa	te sheet)	)
				Problematic	Hydrophytic \	Vegetatio	on¹ (Expla	ain)
				<sup>1</sup> Indicators of hyd	lria aail aad w	votland h	vdrology	must
				be present, unles				musi
				Definitions of Vo	egetation St	rata:		
				Tree – Woody pla	ante 3 in 17 f	S cm) or i	more in	
				diameter at breas				height.
				Sapling/shrub –	Woody plans	ts less th	an 3 in. [	DBH
				and greater than	or equal to 3	.28 ft (1 ı	m) tall.	
· <u> </u>				Herb – All herba	ceous (non-w	oody) pla	ants, reg	ardless
	99	=Total Cover		of size, and wood				
oody Vine Stratum (Plot size:	_)			Woody vines –	All woody vin	es greate	er than 3.	.28 ft in
				height.				
				Hydrophytic				
				Vegetation				
				Present?	Yes X	No_		
		=Total Cover						

Profile Desc Depth	cription: (Describe t Matrix	o the de	-	<b>ıment tl</b> k Featur		ator or c	onfirm the absence of	indicators.)
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-6	10YR 2/1	100	· · · ·				Loamy/Clayey	
6-20	10YR 2/2	80	10YR 5/3	20	С.	PI /M	Mucky Loam/Clay	Distinct redox concentrations
6-20	10YR 2/2	80	10YR 5/3			PL/M	Mucky Loam/Clay	Distinct redox concentrations
¹Type: C=C	oncentration, D=Depl	etion RM		 1S=M=e	ked San	d Grains	<sup>2</sup> Location: PL	
Hydric Soil  Histosol  Histic Ep  Black Hi  Hydroge  Stratified  Depleted  Thick Da  Sandy M  Sandy G  Sandy R  Stripped  X Dark Su	Indicators:  (A1) Dipedon (A2) Stic (A3) En Sulfide (A4) Did Layers (A5) Did Below Dark Surface Eark Surface (A12) Mucky Mineral (S1) Dieyed Matrix (S4) Diedox (S5) Diedox (S6) Diedox (S7)	e (A11)	Polyvalue Belo MLRA 149B Thin Dark Surfa High Chroma S Loamy Mucky I Loamy Gleyed Depleted Matri X Redox Dark Su Depleted Dark Redox Depress Marl (F10) (LR	w Surfa ) ace (S9) Sands (S Mineral Matrix ( x (F3) urface (F Surface Sions (Fi R K, L)	ce (S8) (l ) (LRR R 611) (LRI (F1) (LRI F2) (F6) (F7)	LRR R, , MLRA R K, L) R K, L)	Indicators fo 2 cm Muc Coast Pra 5 cm Muc Polyvalue Thin Dark Iron-Mang Piedmont Mesic Sp Red Pare Very Sha	r Problematic Hydric Soils <sup>3</sup> : ck (A10) (LRR K, L, MLRA 149B) airie Redox (A16) (LRR K, L, R) cky Peat or Peat (S3) (LRR K, L, R) e Below Surface (S8) (LRR K, L) c Surface (S9) (LRR K, L) ganese Masses (F12) (LRR K, L, R) t Floodplain Soils (F19) (MLRA 149B) odic (TA6) (MLRA 144A, 145, 149B) ent Material (F21) Illow Dark Surface (F22) cplain in Remarks)
Type:	nches):						Hydric Soil Presen	t? Yes <u>x</u> No
Remarks: First 4 inche	s is organic material							

Project/Site: Laurel Lakes	City/County: Hudson/Summit Sampling Date: 06/23/2022
Applicant/Owner: RDL Architects	State: OH Sampling Point: 10
Investigator(s): Emily Nagle, Lindsey Jakovljevic	Section, Township, Range:
·	al relief (concave, convex, none): convex Slope %: 10
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.244619°	Long: -81.467924° Datum: NAD 83
Soil Map Unit Name: GbC2	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year?	? Yes X No (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N significantly dist	<del></del>
Are Vegetation N, Soil N, or Hydrology N naturally problem	matic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sa	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No X	Is the Sampled Area
Hydric Soil Present? Yes No X	within a Wetland? Yes No X
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves  Agustic Found (B13)	
High Water Table (A2)  Aquatic Fauna (B13)  And Banasite (B45)	Moss Trim Lines (B16)
Saturation (A3)  Marl Deposits (B15)  Multiple (B15)  Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odo	
Sediment Deposits (B2)  Oxidized Rhizosphere  Presence of Reduced	s on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)  Iron (C4) Stunted or Stressed Plants (D1)
I — · · · · · · · · —	<u> </u>
Algal Mat or Crust (B4)  Iron Deposits (B5)  Recent Iron Reduction Thin Muck Surface (C	
Inundation Visible on Aerial Imagery (B7)  Other (Explain in Rem	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
	(AC-Neutral Test (D3)
Field Observations:	
Surface Water Present? Yes No X Depth (inche	
Water Table Present? Yes No X Depth (inche	
Saturation Present? Yes No X Depth (inche	s): Wetland Hydrology Present? Yes No _X
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	previous inspections), if available:
Demontos	
Remarks:	

Tree Stratum (Plot size: )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test	worksheet			
1				Number of Domir That Are OBL, FA			1	(A)
3. 4.	_			Total Number of Species Across A			2	(B)
	_			Percent of Domir That Are OBL, FA	•		50.0%	 (A/E
				Prevalence Inde	x workshee	t:		
		=Total Cover		Total % Cov	er of:	Mu	Itiply by:	
apling/Shrub Stratum (Plot size:	)	•		OBL species	0			_
	<del>_</del> '			FACW species		'=	0	
				FAC species		-		_
				FACU species		x 4 =	180	_
				UPL species		-		_
				Column Totals:		(A)	375	(E
				_	e Index = B	` ′		—`
				Hydrophytic Veg				
		=Total Cover		1 - Rapid Tes			etation	
erb Stratum (Plot size: )				2 - Dominano		-	<b>9</b>	
Symphyotrichum lateriflorum	40	Yes	FAC	3 - Prevalenc				
Taraxacum officinale	20	Yes	FACU	4 - Morpholo			ovide sur	pport
Daucus carota	15	No	UPL		marks or on			
Poa pratensis	15	No	FACU	Problematic	Hvdrophvtic	Vegetatio	on¹ (Expla	ain)
Lotus corniculatus	10	No	FACU	<sup>1</sup> Indicators of hyd be present, unles	ric soil and v	vetland h	ydrology	
				Definitions of Ve				
				Tree – Woody pla	ants 3 in. (7.	6 cm) or		
				diameter at breas	st height (DB	H), regai	dless of t	neigh
). 				Sapling/shrub – and greater than				ЭВН
2.		=Total Cover		Herb – All herbad				ardle
Yoody Vine Stratum (Plot size:	_)	•		Woody vines – A	All woody vin	es greate	er than 3.	28 ft
				height.				
		·		Hydrophytic				
		·		Vegetation	Vaa	Na	V	
		T-1-1 0		Present?	Yes	NO_	X	
emarks: (Include photo numbers here or on a se		=Total Cover						

(inches) Color (moist)  0-15 10YR 5/4	95	Color (moist) 10YR 6/4	5	C C	M M	Texture  Loamy/Clayey Factoring	Remar	
0-15 10YR 5/4	95	10YR 6/4	5		M .	Loamy/Clayey F	aint redox con	centrations
				_ _ _	:			
	— — · — — · — — ·				·			
	— — · — — · — — ·			<u> </u>	·			
	·							
	·							
	·							
	·							
						_		
<del></del>						<del></del>		
ype: C=Concentration, D=D	epletion, RM=	=Reduced Matrix, N	∕IS=Mask	ked Sand	Grains.	<sup>2</sup> Location: PL=Pore		
ydric Soil Indicators:						Indicators for Prob	-	
Histosol (A1)	-	Polyvalue Belo		ce (S8) ( <b>L</b>	.RR R,	2 cm Muck (A10		
Histic Epipedon (A2)		MLRA 149B	•	<b># 55 5</b>		Coast Prairie Re		
Black Histic (A3)	-	Thin Dark Surf						
Hydrogen Sulfide (A4)	-	High Chroma S			-	Polyvalue Below		
Stratified Layers (A5) Depleted Below Dark Surf	iaca (Δ11)	Loamy Mucky Loamy Gleyed			K K, L)	Thin Dark Surfaction		
Thick Dark Surface (A12)	-	Depleted Matri		2)		Piedmont Flood		
Sandy Mucky Mineral (S1	-	Redox Dark Su		6)		Mesic Spodic (T		
Sandy Gleyed Matrix (S4)		Depleted Dark				Red Parent Mate		, -, -
Sandy Redox (S5)	-	Redox Depress				Very Shallow Da		22)
Stripped Matrix (S6)	_	Marl (F10) (LR	R K, L)			Other (Explain in	Remarks)	
Dark Surface (S7)								
Indicators of hydrophytic vege		etland hydrology mu	ust be pr	esent, un	less dist	urbed or problematic.		
estrictive Layer (if observe	:d):							
Type:								
Depth (inches):						Hydric Soil Present?	Yes	No X
emarks:					-			

Project/Site: Laurel Lakes	City/County: Hudson/Summit Sampling Date: 06/23/2022
Applicant/Owner: RDL Architects	State: OH Sampling Point: 11
Investigator(s): Emily Nagle, Lindsey Jakovljevic	Section, Township, Range:
Landform (hillside, terrace, etc.): Hillside Local	relief (concave, convex, none): Concave Slope %: 8
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.24541941°	Long: -81.46783003° Datum: NAD 83
Soil Map Unit Name: FcB	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N significantly disturb	<del></del>
Are Vegetation N, Soil N, or Hydrology N naturally problema	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: W-V
Remarks: (Explain alternative procedures here or in a separate report.)	
LIVEROLOGY	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
X Surface Water (A1) X Water-Stained Leaves (E	
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
X Water Marks (B1) X Hydrogen Sulfide Odor (	
Sediment Deposits (B2) Oxidized Rhizospheres of	
Drift Deposits (B3) Presence of Reduced Iro	
Algal Mat or Crust (B4)  Recent Iron Reduction ir	
Iron Deposits (B5) Thin Muck Surface (C7)	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remark	
X Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes X No Depth (inches):	
Water Table Present? Yes No X Depth (inches): Saturation Present? Yes X No Depth (inches):	
Saturation Present? Yes X No Depth (inches):	<u>2</u> Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
Demodra	
Remarks:	

## **VEGETATION** – Use scientific names of plants.

Tree Stratum (Plot size: )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
Fraxinus pennsylvanica	25	Yes	FACW	Dominance rest worksneet.
Quercus bicolor	20	Yes	FACW	Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)
				That Ale OBL, FACW, of FAC(A)
3. Acer saccharinum	10	No No	FACW	Total Number of Dominant
4. Acer rubrum	10	<u>No</u>	FAC	Species Across All Strata: 6 (B)
5 6				Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
7				Prevalence Index worksheet:
	65	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:)				OBL species 5 x 1 = 5
Fraxinus pennsylvanica	15	Yes	FACW	FACW species 135 x 2 = 270
2.				FAC species10 x 3 =30
3.				FACU species0 x 4 =0
4.				UPL species 0 x 5 = 0
5.				Column Totals: 150 (A) 305 (B)
6.				Prevalence Index = B/A = 2.03
7.				Hydrophytic Vegetation Indicators:
	15	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: )		•		X 2 - Dominance Test is >50%
Lysimachia nummularia	35	Yes	FACW	X 3 - Prevalence Index is ≤3.0 <sup>1</sup>
Impatiens capensis	15	Yes	FACW	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
Carex alopecoidea	15	Yes	FACW	data in Remarks or on a separate sheet)
4. Carex leptalea	5	No	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
				<u> </u>
6.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7				Definitions of Vegetation Strata:
8.				Definitions of Vegetation Strata.
9.		·		<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
10.		·		Sapling/shrub – Woody plants less than 3 in. DBH
11.				and greater than or equal to 3.28 ft (1 m) tall.
12	70	=Total Cover		<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: )		•		Weeds vines All weeds vines greater than 2.20 ft in
1.				Woody vines – All woody vines greater than 3.28 ft in height.
2.				-
3.				Hydrophytic
4.				Vegetation Present? Yes X No
·		=Total Cover		
Remarks: (Include photo numbers here or on a separ	oto oboot \	•		
Remarks. (include prioto numbers here of on a separ	ale Sileel.)			

Sampling Point: 11

Depth	cription: (Describe t Matrix	o the de	-	<b>ıment tl</b> x Featur		ator or c	onfirm the absence o	f indicators.)
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-18	10YR 2/1	90	7.5YR 4/6	10	<u>C</u>	<u>M</u>	Mucky Loam/Clay	Prominent redox concentrations
						_		
		_		_		_		
		_		_		_		
		_			_	_		
<sup>1</sup> Type: C=C	oncentration, D=Depl	etion RN	M=Reduced Matrix N	MS-Mas	ked San	d Grains	<sup>2</sup> l ocation: P	L=Pore Lining, M=Matrix.
Black Hi X Hydroge Stratified Depleted Thick Da Sandy M Sandy G Sandy R Stripped Dark Su	(A1) bipedon (A2) stic (A3) n Sulfide (A4) d Layers (A5) d Below Dark Surface ark Surface (A12) flucky Mineral (S1) fleyed Matrix (S4) fledox (S5) Matrix (S6) frace (S7)		Polyvalue Belo MLRA 149B Thin Dark Surfi High Chroma S Loamy Mucky Loamy Gleyed Depleted Matri X Redox Dark Su Depleted Dark Redox Depress Marl (F10) (LR	) ace (S9) Sands (S Mineral ( Matrix ( x (F3) urface (F Surface sions (F8 R K, L)	(LRR R 611) (LRI (F1) (LRI F2) 66) (F7)	, MLRA R K, L) R K, L)	2 cm Mu Coast Pi 5 cm Mu Polyvalu Thin Dar Iron-Mar Piedmor Mesic Si Red Par Very Sha	or Problematic Hydric Soils <sup>3</sup> :  cick (A10) (LRR K, L, MLRA 149B)  rairie Redox (A16) (LRR K, L, R)  cicky Peat or Peat (S3) (LRR K, L, R)  the Below Surface (S8) (LRR K, L)  rk Surface (S9) (LRR K, L)  rganese Masses (F12) (LRR K, L, R)  the Floodplain Soils (F19) (MLRA 149B)  podic (TA6) (MLRA 144A, 145, 149B)  tent Material (F21)  allow Dark Surface (F22)  explain in Remarks)
Type: Depth (ii							Hydric Soil Presei	nt? Yes <u>X</u> No
Remarks:								

Project/Site: Laurel Lakes	City/County: Hudson/Summit Sampling Date: 8/16/22
Applicant/Owner: RDL Architects	State: OH Sampling Point: 12
Investigator(s): Emily Nagle, Lindsey Jakovljevic	Section, Township, Range:
	relief (concave, convex, none): Concave Slope %: 3
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.242962°	Long: -81.474999° Datum: NAD 83
Soil Map Unit Name: CcB	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N significantly disturb	<del></del>
Are Vegetation N, Soil N, or Hydrology N naturally problema	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, transects, important features, etc.
Lhidraphitia Vagatatian Dragant?	Is the Sampled Area
Hydrophytic Vegetation Present?  Yes X No  Hydric Soil Present?  Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present?  Yes X No	If yes, optional Wetland Site ID: W-P
Remarks: (Explain alternative procedures here or in a separate report.)	
Tremains. (Explain alternative procedures here of in a separate report.)	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) X Water-Stained Leaves (E	X Drainage Patterns (B10)
High Water Table (A2)  Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (	C1) Crayfish Burrows (C8)
Sediment Deposits (B2)  Oxidized Rhizospheres of	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iro	on (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in	Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remark	ks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (inches):	
Water Table Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	vious inspections), if available:
Remarks:	

## **VEGETATION** – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:			
1. Acer rubrum	60	Yes	FAC	Number of Deminerat Consiss			
Quercus palustris	20	Yes	FACW	Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)			
Nyssa sylvatica	10	No	FAC	Total Number of Dominant Species Across All Strata: 8 (B)			
5.				``			
6.				Percent of Dominant Species That Are OBL, FACW, or FAC:100.0% (A/B)			
7				Prevalence Index worksheet:			
	90	=Total Cover		Total % Cover of: Multiply by:			
Sapling/Shrub Stratum (Plot size:)				OBL species45 x 1 =45			
Fraxinus pennsylvanica	5	Yes	FACW	FACW species 43 x 2 = 86			
2. Quercus palustris	5	Yes	FACW	FAC species 80 x 3 = 240			
3.				FACU species 5 x 4 = 20			
4.				UPL species0 x 5 =0			
5.				Column Totals: 173 (A) 391 (B)			
6.				Prevalence Index = B/A = 2.26			
7.				Hydrophytic Vegetation Indicators:			
	10	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation			
Herb Stratum (Plot size: )				X 2 - Dominance Test is >50%			
Juncus effusus	20	Yes	OBL	X 3 - Prevalence Index is ≤3.0 <sup>1</sup>			
Asclepias incarnata	15	Yes	OBL	4 - Morphological Adaptations <sup>1</sup> (Provide supporting			
3. Carex lupulina	10	Yes	OBL	data in Remarks or on a separate sheet)			
4. Apocynum cannabinum	10	Yes	FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)			
5. Phalaris arundinacea	5	No	FACW	<del> </del>			
6. Solidago canadensis	5	No	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
7. Chasmanthium latifolium	5	No	FACW	Definitions of Vegetation Strata:			
Doellingeria umbellata	3	No	FACW	_			
9.				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.			
10				Sapling/shrub – Woody plants less than 3 in. DBH			
11				and greater than or equal to 3.28 ft (1 m) tall.			
12	73	=Total Cover		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.			
Woody Vine Stratum (Plot size: )				Was designed. All supplies the second of the control of the contro			
1.				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.			
2.							
3.				Hydrophytic			
4.				Vegetation Present? Yes X No			
T		=Total Cover		1105cm: 105 <u>X</u> NO			
Demarka: (Include photo numbers here or on a cons		=10tai 00vci					
Remarks: (Include photo numbers here or on a separ	ate sneet.)						

Sampling Point: 12

Color (moist)	Depth	Matrix	io ine de	•	r Featu		1101 01 0	onfirm the absence o	i mulcators.)
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.   Location: PL=Pore Lining, M=Matrix.	(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.  **Location: PL=Pore Lining, M=Matrix.  **Hydric Soil Indicators:    Histosol (A1)	0-6	10YR 2/2	90	10YR 5/6	10	С	М	Mucky Loam/Clay	Prominent redox concentrations
Hydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R,  Coast Prairie Redox (A16) (LRR K, L, MLRA 149B)  Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  Stratified Layers (A5)  Loamy Mucky Mineral (F1) (LRR K, L)  Thick Dark Surface (A12)  Depleted Matrix (F3)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Redox Depressions (F8)  Marl (F10) (LRR K, L)  Depth (inches):  Hydric Soil Present?  Hydric Soil Present?  Hydric Soil Present?  Yes X No	6-20	10YR 5/2	85	10YR 6/8	15	C	<u>M</u>	Mucky Loam/Clay	Prominent redox concentrations
Hydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R,  Coast Prairie Redox (A16) (LRR K, L, MLRA 149B)  Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  Stratified Layers (A5)  Loamy Mucky Mineral (F1) (LRR K, L)  Thick Dark Surface (A12)  Depleted Matrix (F3)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Redox Depressions (F8)  Marl (F10) (LRR K, L)  Depth (inches):  Hydric Soil Present?  Hydric Soil Present?  Hydric Soil Present?  Yes X No									
Hydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R, Histosol (A2)  MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, MLRA 149B)  Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  Stratified Layers (A5)  Loamy Mucky Mineral (F1) (LRR K, L)  Thick Dark Surface (A12)  Depleted Below Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Redox Dark Surface (F7)  Sandy Redox (S5)  Marl (F10) (LRR K, L)  Mesic Spoid (TA6) (MLRA 144A, 145, 149B)  Mesic Spoid (TA6) (MLRA 144A, 145, 149B)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Hydric Soil Present?  Yes X No  Hydric Soil Present?  Hydric Soil Present?  Yes X No									
Hydric Soil Indicators:  Histosol (A1)  Histosol (A2)  MLRA 149B)  Discrete Epipedon (A2)  MLRA 149B)  Histic Epipedon (A2)  MLRA 149B)  Discrete Epipedon (A2)  Musky Peat or Peat (S3) (LRR K, L, R)  Polyvalue Below Surface (S8) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Discrete Matrix (F2)  Discrete Matrix (F3)  Discrete Matrix (F3)  Discrete Matrix (F4)  Discrete Epipedon (A2)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Mesic Spodic (TA6									
Hydric Soil Indicators:  Histosol (A1)  Histosol (A2)  MLRA 149B)  Discrete Epipedon (A2)  MLRA 149B)  Histic Epipedon (A2)  MLRA 149B)  Discrete Epipedon (A2)  Musky Peat or Peat (S3) (LRR K, L, R)  Polyvalue Below Surface (S8) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Discrete Matrix (F2)  Discrete Matrix (F3)  Discrete Matrix (F3)  Discrete Matrix (F4)  Discrete Epipedon (A2)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Mesic Spodic (TA6									
Hydric Soil Indicators:  Histosol (A1)  Histosol (A2)  MLRA 149B)  Discrete Epipedon (A2)  MLRA 149B)  Histic Epipedon (A2)  MLRA 149B)  Discrete Epipedon (A2)  Musky Peat or Peat (S3) (LRR K, L, R)  Polyvalue Below Surface (S8) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Discrete Matrix (F2)  Discrete Matrix (F3)  Discrete Matrix (F3)  Discrete Matrix (F4)  Discrete Epipedon (A2)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Mesic Spodic (TA6									
Hydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R, Histosol (A2)  MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, MLRA 149B)  Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  Stratified Layers (A5)  Loamy Mucky Mineral (F1) (LRR K, L)  Thick Dark Surface (A12)  Depleted Below Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Redox Dark Surface (F7)  Sandy Redox (S5)  Marl (F10) (LRR K, L)  Mesic Spoid (TA6) (MLRA 144A, 145, 149B)  Mesic Spoid (TA6) (MLRA 144A, 145, 149B)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Hydric Soil Present?  Yes X No  Hydric Soil Present?  Hydric Soil Present?  Yes X No									
Hydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R, Histosol (A2)  MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, MLRA 149B)  Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  Stratified Layers (A5)  Loamy Mucky Mineral (F1) (LRR K, L)  Thick Dark Surface (A12)  Depleted Below Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Redox Dark Surface (F7)  Sandy Redox (S5)  Marl (F10) (LRR K, L)  Mesic Spoid (TA6) (MLRA 144A, 145, 149B)  Mesic Spoid (TA6) (MLRA 144A, 145, 149B)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Hydric Soil Present?  Yes X No  Hydric Soil Present?  Hydric Soil Present?  Yes X No									
Hydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R, Histosol (A2)  MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, MLRA 149B)  Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  Stratified Layers (A5)  Loamy Mucky Mineral (F1) (LRR K, L)  Thick Dark Surface (A12)  Depleted Below Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Redox Dark Surface (F7)  Sandy Redox (S5)  Marl (F10) (LRR K, L)  Mesic Spoid (TA6) (MLRA 144A, 145, 149B)  Mesic Spoid (TA6) (MLRA 144A, 145, 149B)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Hydric Soil Present?  Yes X No  Hydric Soil Present?  Hydric Soil Present?  Yes X No									
Hydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R, Histosol (A2)  MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, MLRA 149B)  Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  Stratified Layers (A5)  Loamy Mucky Mineral (F1) (LRR K, L)  Thick Dark Surface (A12)  Depleted Below Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Redox Dark Surface (F7)  Sandy Redox (S5)  Marl (F10) (LRR K, L)  Mesic Spoid (TA6) (MLRA 144A, 145, 149B)  Mesic Spoid (TA6) (MLRA 144A, 145, 149B)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Hydric Soil Present?  Yes X No  Hydric Soil Present?  Hydric Soil Present?  Yes X No									
Histosol (A1)			etion, RN	M=Reduced Matrix, M	IS=Mas	ked Sand	Grains		-
Histic Epipedon (A2)  Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  5 cm Mucky Peat or Peat (S3) (LRR K, L, R)  Hydrogen Sulfide (A4)  High Chroma Sands (S11) (LRR K, L)  Stratified Layers (A5)  Loamy Mucky Mineral (F1) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  X Depleted Below Dark Surface (A11)  Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Redox Depressions (F8)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Other (Explain in Remarks)  Judicators 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	•			Polyvalue Belo	w Surfa	re (S8) (I	RR R		•
Black Histic (A3)						(00) (1			
Stratified Layers (A5)  Loamy Mucky Mineral (F1) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  X Depleted Below Dark Surface (A11)  Depleted Matrix (F2)  Thick Dark Surface (A12)  Depleted Matrix (F3)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F7)  Sandy Redox (S5)  Redox Depressions (F8)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Other (Explain in Remarks)  Jandicators 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				,		) (LRR R	, MLRA		
X Depleted Below Dark Surface (A11) Loamy Gleyed Matrix (F2) Iron-Manganese Masses (F12) (LRR K, L, R — Thick Dark Surface (A12) Depleted Matrix (F3) Piedmont Floodplain Soils (F19) (MLRA 149 — Sandy Mucky Mineral (S1) X Redox Dark Surface (F6) Mesic Spodic (TA6) (MLRA 144A, 145, 1491 — Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Red Parent Material (F21) — Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (F22) — Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks) — Dark Surface (S7)  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	Hydroge	en Sulfide (A4)		High Chroma S	ands (S	511) ( <b>LRF</b>	R K, L)	Polyvalu	ie Below Surface (S8) (LRR K, L)
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Redox Depleted Dark Surface (F7) Red Parent Material (F21) Stripped Matrix (S6) Dark Surface (S7)  Stripped Matrix (S6) Dark Surface (S7)  SIndicators 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	Stratifie	d Layers (A5)		Loamy Mucky N	Mineral	(F1) ( <b>LRI</b>	R K, L)	Thin Dar	rk Surface (S9) ( <b>LRR K, L</b> )
Sandy Mucky Mineral (S1) X Redox Dark Surface (F6) Mesic Spodic (TA6) (MLRA 144A, 145, 149I Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Red Parent Material (F21) Very Shallow Dark Surface (F22) Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks)  3Indicators 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	X Deplete	d Below Dark Surface	(A11)	Loamy Gleyed	Matrix (	(F2)		Iron-Mar	nganese Masses (F12) (LRR K, L, R)
Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Redox Depressions (F8)  Stripped Matrix (S6)  Dark Surface (S7)   3Indicators 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	Thick Da	ark Surface (A12)		Depleted Matrix	(F3)			Piedmor	nt Floodplain Soils (F19) ( <b>MLRA 149B</b> )
Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (F22)  Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks)  Dark Surface (S7)   3Indicators 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	Sandy N	Mucky Mineral (S1)		X Redox Dark Su	rface (F	<del>-</del> 6)		Mesic S <sub>l</sub>	podic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
Stripped Matrix (S6)	Sandy C	Gleyed Matrix (S4)		Depleted Dark	Surface	e (F7)		Red Par	ent Material (F21)
Dark Surface (S7)  3Indicators 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	Sandy F	Redox (S5)		Redox Depress	ions (F	8)		Very Sha	allow Dark Surface (F22)
3Indicators 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	Stripped	d Matrix (S6)		Marl (F10) ( <b>LRI</b>	R K, L)			Other (E	explain in Remarks)
Restrictive Layer (if observed):           Type:	Dark Su	ırface (S7)							
Type:				vetland hydrology mu	st be p	resent, ur	nless dis	turbed or problematic.	
Depth (inches): Hydric Soil Present? Yes X No		Layer (if observed):							
Remarks:		nches):						Hydric Soil Presei	nt? Yes X No
	Remarks:							1	

Project/Site: Laurel Lakes	City/County: Hudson/Summit Sampling Date: 8/16/22
Applicant/Owner: RDL Architects	State: OH Sampling Point: 13
Investigator(s): Emily Nagle, Lindsey Jakovljevic	Section, Township, Range:
	relief (concave, convex, none): none Slope %: 2
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.243215°	Long: -81.474999° Datum: NAD 83
Soil Map Unit Name: CcB	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N significantly distur	
Are Vegetation N, Soil N, or Hydrology N naturally problems	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No X	Is the Sampled Area
Hydric Soil Present?  Yes  No X	within a Wetland? Yes No X
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (	<del></del>
High Water Table (A2)  Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3)  Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor	
Sediment Deposits (B2)  Oxidized Rhizospheres	i i i i i i i i i i i i i i i i i i i
Drift Deposits (B3)  Presence of Reduced In	
Algal Mat or Crust (B4)  Recent Iron Reduction in	
Iron Deposits (B5)  Thin Muck Surface (C7)	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remai	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (inches)	
Water Table Present? Yes No X Depth (inches) Saturation Present? Yes No X Depth (inches)	
(includes capillary fringe)	Wedand Hydrology Freschi: Fes NoX
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections) if available:
Describe recorded Data (stream gauge, monitoring well, actial photos, pre	vious inspections), il available.
Remarks:	

# **VEGETATION** – Use scientific names of plants.

Tree Stratum (Plot size: )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Acer rubrum	50	Yes	FAC	Newhork (Bassinast Onesia
2. Quercus rubra	30	Yes	FACU	Number of Dominant Species That Are OBL, FACW, or FAC:(A)
3. 4.				Total Number of Dominant Species Across All Strata:6(B)
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)
7				Prevalence Index worksheet:
· .	· ·	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:)				OBL species 0 x 1 = 0
Fraxinus pennsylvanica	15	Yes	FACW	FACW species 25 x 2 = 50
2. Crataegus pruinosa	10	Yes	UPL	FAC species 50 x 3 = 150
3. Quercus rubra	5	No	FACU	FACU species 95 x 4 = 380
4.				UPL species 10 x 5 = 50
5.				Column Totals: 180 (A) 630 (B)
6.				Prevalence Index = B/A = 3.50
7.				Hydrophytic Vegetation Indicators:
	30	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: )				2 - Dominance Test is >50%
1. Poa pratensis	30	Yes	FACU	3 - Prevalence Index is ≤3.0 <sup>1</sup>
Solidago canadensis	15	Yes	FACU	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
3. Potentilla simplex	10	No	FACU	data in Remarks or on a separate sheet)
Chasmanthium latifolium	10	No	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5. Rosa multiflora	5	No	FACU	<del> </del>
6.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7.	<del></del>			Definitions of Vegetation Strata:
8.				_
9.				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
10.				
11.				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
12				Herb – All herbaceous (non-woody) plants, regardless
	70	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size:)	1			Woody vines – All woody vines greater than 3.28 ft in
1.	<del></del>			height.
2.	<del></del>			Hydrophytic
3.				Vegetation
4.	· <del></del>	Tatal Cause		Present?
		=Total Cover		
Remarks: (Include photo numbers here or on a sep				

Sampling Point:

13

Color (moist) % Color (moist) % Type' Loc' Texture Remarks  0-3 10YR 4/2 95 10YR 5/4 5 C M Loamy/Clayey  Type: C=Concentration. D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.  Hydric Soil Indicators: Hydric Soil Indicators: Histoic Epipedon (A2) Histoic Epipedon (A2) Histoic Epipedon (A2) MRR A 149B) Histoic (A3) Thin Dark Surface (S8) (LRR R, MLRA 149B) Hydric Soil Indicators: Hydrogen Sulfide (A4) High Chroma Sands (S11) (LRR K, L) Depleted Bolow Dark Surface (A12) Depleted Bolow Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Depleted Matrix (F3) Sandy Mucky Mineral (S1) Redox Dark Surface (F7) Sandy Redox (S5) Redox Depressions (F8) Derived More (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Redox (S5) Redox Depressions (F8) Derived Matrix (S4) Depleted Dark Surface (F7) Sandy Redox (S5) Redox Depressions (F8) Derived Matrix (S4) Depleted Dark Surface (F7) Sandy Redox (S5) Redox Depressions (F8) Derived Matrix (S4) Depleted Dark Surface (F7) Sandy Redox (S5) Redox Depressions (F8) Derived Matrix (S4) Depleted Dark Surface (F7) Sandy Redox (S5) Redox Depressions (F8) Derived Matrix (S4) Depleted Dark Surface (F7) Sandy Redox (S5) Redox Depressions (F8) Depth (inches): 3 Hydric Soil Present? Yes No X  Remarks:	Depth	Matrix			Featu	- 1	. 2	<b>.</b>		_		
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.  ## Hydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R, Coast Prairie Redox (A16) (LRR K, L, MLRA 149B)  Black Histic Epipedon (A2)  Black Histic (A3)  High Ghroma Sands (S11) (LRR K, L)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Depleted Below Dark Surface (A11)  Thin Dark Surface (F2)  Thin Dark Surface (F2)  Thin Dark Surface (S9) (LRR K, L)  Ton-Mampanses Masses (F12) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Ton-Mampanses Masses (F12) (LRR K, L)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Redox Dark Surface (F7)  Red Parent Material (F21)  Sandy Redox (S5)  Redox Depressions (F8)  Dark Surface (S7)  Profilicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if observed):  Type: roots  Depth (inches):  3   Hydric Soil Present? Yes No X	(inches)	Color (moist)	%	Color (moist)	%	Type	Loc <sup>2</sup>	Texture		Rema	irks	
Hydric Soil Indicators:  Histosol (A1)  Histosol (A2)  MLRA 149B)  Deleted Below Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Extratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Depleted Matrix (F3)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Redox Depressions (F8)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Depth (inches):  3  Polyvalue Below Surface (A12)  Depth (inches):  3  Polyvalue Below Surface (A12)  Depleted Below Dark Surface (A13)  Depleted Dark Surface (F6)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Stripped Matrix (S6)  Dark Surface (S7)  Hydric Soil Present?  Yes  No  X	0-3	10YR 4/2	95	10YR 5/4	5	С	M	Loamy/Clayey				
Hydric Soil Indicators:  Histosol (A1)  Histosol (A2)  MLRA 149B)  Deleted Below Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Extratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Depleted Matrix (F3)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Redox Depressions (F8)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Depth (inches):  3  Polyvalue Below Surface (A12)  Depth (inches):  3  Polyvalue Below Surface (A12)  Depleted Below Dark Surface (A13)  Depleted Dark Surface (F6)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Stripped Matrix (S6)  Dark Surface (S7)  Hydric Soil Present?  Yes  No  X												
Hydric Soil Indicators:  Histosol (A1)  Histosol (A2)  MLRA 149B)  Deleted Below Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Extratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Depleted Matrix (F3)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Redox Depressions (F8)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Depth (inches):  3  Polyvalue Below Surface (A12)  Depth (inches):  3  Polyvalue Below Surface (A12)  Depleted Below Dark Surface (A13)  Depleted Dark Surface (F6)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Stripped Matrix (S6)  Dark Surface (S7)  Hydric Soil Present?  Yes  No  X												
Hydric Soil Indicators:  Histosol (A1)  Histosol (A2)  MLRA 149B)  Black Histic Epipedon (A2)  High Chroma Sands (S1) (LRR K, L)  Estratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Depleted Matrix (F3)  Sandy Mucky Mineral (S1)  Sandy Redox (S5)  Bandy Redox (S5)  Endox Depleted Dark Surface (F6)  Sandy Redox (S5)  Endox Depleted Dark Surface (F7)  Sandy Redox (S5)  Redox Depressions (F8)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Depleted Dark Surface (S7)  Hydric Soil Present?  Polyvalue Below Surface (A12)  Depleted Matrix (F3)  Piedmont Floodplain Soils (F19) (MLRA 149B)  Sandy Mucky Mineral (S1)  Redox Dark Surface (F6)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Hydric Soil Present?  Yes  No  X									-			
Hydric Soil Indicators:  Histosol (A1)  Histosol (A2)  MLRA 149B)  Black Histic Epipedon (A2)  High Chroma Sands (S1) (LRR K, L)  Estratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Depleted Matrix (F3)  Sandy Mucky Mineral (S1)  Sandy Redox (S5)  Bandy Redox (S5)  Endox Depleted Dark Surface (F6)  Sandy Redox (S5)  Endox Depleted Dark Surface (F7)  Sandy Redox (S5)  Redox Depressions (F8)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Depleted Dark Surface (S7)  Hydric Soil Present?  Polyvalue Below Surface (A12)  Depleted Matrix (F3)  Piedmont Floodplain Soils (F19) (MLRA 149B)  Sandy Mucky Mineral (S1)  Redox Dark Surface (F6)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Hydric Soil Present?  Yes  No  X												
Hydric Soil Indicators:  Histosol (A1)  Histosol (A2)  MLRA 149B)  Black Histic Epipedon (A2)  High Chroma Sands (S1) (LRR K, L)  Estratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Depleted Matrix (F3)  Sandy Mucky Mineral (S1)  Sandy Redox (S5)  Bandy Redox (S5)  Endox Depleted Dark Surface (F6)  Sandy Redox (S5)  Endox Depleted Dark Surface (F7)  Sandy Redox (S5)  Redox Depressions (F8)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Depleted Dark Surface (S7)  Hydric Soil Present?  Polyvalue Below Surface (A12)  Depleted Matrix (F3)  Piedmont Floodplain Soils (F19) (MLRA 149B)  Sandy Mucky Mineral (S1)  Redox Dark Surface (F6)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Hydric Soil Present?  Yes  No  X												
Hydric Soil Indicators:  Histosol (A1)  Histosol (A2)  MLRA 149B)  Black Histic Epipedon (A2)  High Chroma Sands (S1) (LRR K, L)  Estratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Depleted Matrix (F3)  Sandy Mucky Mineral (S1)  Sandy Redox (S5)  Bandy Redox (S5)  Endox Depleted Dark Surface (F6)  Sandy Redox (S5)  Endox Depleted Dark Surface (F7)  Sandy Redox (S5)  Redox Depressions (F8)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Depleted Dark Surface (S7)  Hydric Soil Present?  Polyvalue Below Surface (A12)  Depleted Matrix (F3)  Piedmont Floodplain Soils (F19) (MLRA 149B)  Sandy Mucky Mineral (S1)  Redox Dark Surface (F6)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Hydric Soil Present?  Yes  No  X				_								
Hydric Soil Indicators:  Histosol (A1)  Histosol (A2)  MLRA 149B)  Black Histic Epipedon (A2)  High Chroma Sands (S1) (LRR K, L)  Estratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Depleted Matrix (F3)  Sandy Mucky Mineral (S1)  Sandy Redox (S5)  Bandy Redox (S5)  Endox Depleted Dark Surface (F6)  Sandy Redox (S5)  Endox Depleted Dark Surface (F7)  Sandy Redox (S5)  Redox Depressions (F8)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Depleted Dark Surface (S7)  Hydric Soil Present?  Polyvalue Below Surface (A12)  Depleted Matrix (F3)  Piedmont Floodplain Soils (F19) (MLRA 149B)  Sandy Mucky Mineral (S1)  Redox Dark Surface (F6)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Hydric Soil Present?  Yes  No  X												
Hydric Soil Indicators:  Histosol (A1)  Histosol (A2)  MLRA 149B)  Black Histic Epipedon (A2)  High Chroma Sands (S1) (LRR K, L)  Estratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Depleted Matrix (F3)  Sandy Mucky Mineral (S1)  Sandy Redox (S5)  Bandy Redox (S5)  Endox Depleted Dark Surface (F6)  Sandy Redox (S5)  Endox Depleted Dark Surface (F7)  Sandy Redox (S5)  Redox Depressions (F8)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Depleted Dark Surface (S7)  Hydric Soil Present?  Polyvalue Below Surface (A12)  Depleted Matrix (F3)  Piedmont Floodplain Soils (F19) (MLRA 149B)  Sandy Mucky Mineral (S1)  Redox Dark Surface (F6)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Hydric Soil Present?  Yes  No  X												
Hydric Soil Indicators:  Histosol (A1)  Histosol (A2)  MLRA 149B)  Black Histic Epipedon (A2)  High Chroma Sands (S1) (LRR K, L)  Estratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Depleted Matrix (F3)  Sandy Mucky Mineral (S1)  Sandy Redox (S5)  Bandy Redox (S5)  Endox Depleted Dark Surface (F6)  Sandy Redox (S5)  Endox Depleted Dark Surface (F7)  Sandy Redox (S5)  Redox Depressions (F8)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Depleted Dark Surface (S7)  Hydric Soil Present?  Polyvalue Below Surface (A12)  Depleted Matrix (F3)  Piedmont Floodplain Soils (F19) (MLRA 149B)  Sandy Mucky Mineral (S1)  Redox Dark Surface (F6)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Hydric Soil Present?  Yes  No  X												
Hydric Soil Indicators:  Histosol (A1)  Histosol (A2)  MLRA 149B)  Deleted Below Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Extratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Depleted Matrix (F3)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Redox Depressions (F8)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Depth (inches):  3  Polyvalue Below Surface (A12)  Depth (inches):  3  Polyvalue Below Surface (A12)  Depleted Below Dark Surface (A13)  Depleted Dark Surface (F6)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Stripped Matrix (S6)  Dark Surface (S7)  Hydric Soil Present?  Yes  No  X												
Hydric Soil Indicators:  Histosol (A1)  Histosol (A2)  MLRA 149B)  Deleted Below Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Extratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Depleted Matrix (F3)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Redox Depressions (F8)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Depth (inches):  3  Polyvalue Below Surface (A12)  Depth (inches):  3  Polyvalue Below Surface (A12)  Depleted Below Dark Surface (A13)  Depleted Dark Surface (F6)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Stripped Matrix (S6)  Dark Surface (S7)  Hydric Soil Present?  Yes  No  X												
Hydric Soil Indicators:  Histosol (A1)  Histosol (A2)  MLRA 149B)  Deleted Below Surface (S9) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Extratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Depleted Matrix (F3)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Redox Depressions (F8)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Depth (inches):  3  Polyvalue Below Surface (A12)  Depth (inches):  3  Polyvalue Below Surface (A12)  Depleted Below Dark Surface (A13)  Depleted Dark Surface (F6)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Stripped Matrix (S6)  Dark Surface (S7)  Hydric Soil Present?  Yes  No  X												
Hydric Soil Indicators:  Histosol (A1)  Histosol (A2)  MLRA 149B)  Black Histic Epipedon (A2)  High Chroma Sands (S1) (LRR K, L)  Estratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Depleted Matrix (F3)  Sandy Mucky Mineral (S1)  Sandy Redox (S5)  Bandy Redox (S5)  Endox Depleted Dark Surface (F6)  Sandy Redox (S5)  Endox Depleted Dark Surface (F7)  Sandy Redox (S5)  Redox Depressions (F8)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Depleted Dark Surface (S7)  Hydric Soil Present?  Polyvalue Below Surface (A12)  Depleted Matrix (F3)  Piedmont Floodplain Soils (F19) (MLRA 149B)  Sandy Mucky Mineral (S1)  Redox Dark Surface (F6)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Hydric Soil Present?  Yes  No  X			·	_								
Hydric Soil Indicators:  Histosol (A1)  Histosol (A2)  MLRA 149B)  Black Histic Epipedon (A2)  High Chroma Sands (S1) (LRR K, L)  Estratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Depleted Matrix (F3)  Sandy Mucky Mineral (S1)  Sandy Redox (S5)  Bandy Redox (S5)  Endox Depleted Dark Surface (F6)  Sandy Redox (S5)  Endox Depleted Dark Surface (F7)  Sandy Redox (S5)  Redox Depressions (F8)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Depleted Dark Surface (S7)  Hydric Soil Present?  Polyvalue Below Surface (A12)  Depleted Matrix (F3)  Piedmont Floodplain Soils (F19) (MLRA 149B)  Sandy Mucky Mineral (S1)  Redox Dark Surface (F6)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Hydric Soil Present?  Yes  No  X												
Hydric Soil Indicators:  Histosol (A1)  Histosol (A2)  MLRA 149B)  Black Histic Epipedon (A2)  High Chroma Sands (S1) (LRR K, L)  Estratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Depleted Matrix (F3)  Sandy Mucky Mineral (S1)  Sandy Redox (S5)  Bandy Redox (S5)  Endox Depleted Dark Surface (F6)  Sandy Redox (S5)  Endox Depleted Dark Surface (F7)  Sandy Redox (S5)  Redox Depressions (F8)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Depleted Dark Surface (S7)  Hydric Soil Present?  Polyvalue Below Surface (A12)  Depleted Matrix (F3)  Piedmont Floodplain Soils (F19) (MLRA 149B)  Sandy Mucky Mineral (S1)  Redox Dark Surface (F6)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Hydric Soil Present?  Yes  No  X												
Histosol (A1)	<sup>1</sup> Type: C=C	concentration, D=Depl	etion, RM	=Reduced Matrix, M	1S=Mas	sked Sand	d Grains.	<sup>2</sup> Location: F	PL=Pore L	ining, M=Ma	atrix.	
Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Thin Dark Surface (S9) (LRR R, MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Thin Dark Surface (S9) (LRR K, L) High Chroma Sands (S11) (LRR K, L) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Loamy Gleyed Matrix (F2) Thick Dark Surface (A12) Depleted Matrix (F3) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (F22) Stripped Matrix (S6) Dark Surface (S7)  *Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  *Restrictive Layer (if observed): Type: roots  Depth (inches): 3  *Hydric Soil Present? Yes No X	-									-		
Black Histic (A3)						ice (S8) (I	LRR R,					
Hydrogen Sulfide (A4)  High Chroma Sands (S11) (LRR K, L)  Polyvalue Below Surface (S8) (LRR K, L)  Stratified Layers (A5)  Loamy Mucky Mineral (F1) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Depleted Below Dark Surface (A11)  Loamy Gleyed Matrix (F2)  Iron-Manganese Masses (F12) (LRR K, L, R)  Thick Dark Surface (A12)  Depleted Matrix (F3)  Piedmont Floodplain Soils (F19) (MLRA 149B)  Sandy Mucky Mineral (S1)  Redox Dark Surface (F6)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F7)  Red Parent Material (F21)  Sandy Redox (S5)  Redox Depressions (F8)  Very Shallow Dark Surface (F22)  Stripped Matrix (S6)  Marl (F10) (LRR K, L)  Other (Explain in Remarks)  Dark Surface (S7)  *Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  *Restrictive Layer (if observed):  Type:  roots  Depth (inches): 3  Hydric Soil Present? Yes No X				,								
Stratified Layers (A5)												
Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (F3)  Sandy Redox Dark Surface (F6)  Stripped Matrix (S6)  Dark Surface (S7)  Stripped Matrix (S6)  Dark Surface (S7)  Piedmont Floodplain Soils (F19) (MLRA 149B)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Wery Shallow Dark Surface (F21)  Other (Explain in Remarks)  Other (Explain in Remarks)  Piedmont Floodplain Soils (F19) (MLRA 149B)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  No X  Piedmont Floodplain Soils (F19) (MLRA 149B)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)							-					L)
Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F6)  Sandy Redox (S5)  Redox Depressions (F8)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Other (Explain in Remarks)  Piedmont Floodplain Soils (F19) (MLRA 149B)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Red Parent Material (F21)  Very Shallow Dark Surface (F22)  Other (Explain in Remarks)  Other (Explain in Remarks)  Piedmont Floodplain Soils (F19) (MLRA 149B)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Mesic Spodic (TA6) (MLRA 149B)  Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Mesic Spodic (TA6) (MLRA 149B)  Mesic Spodic (TA6) (			. (Δ11)				K K, L)					I D)
Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Mesic Spodic (TA6) (MLRA 144A, 145, 149B)  Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Red Parent Material (F21)  Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (F22)  Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks)  Dark Surface (S7)   3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if observed):  Type: roots  Depth (inches): 3 Hydric Soil Present? Yes No X			(A11)			(FZ)			-			
Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Redox Depressions (F8)  Stripped Matrix (S6)  Dark Surface (S7)  3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if observed):  Type: roots  Depth (inches): 3  Hydric Soil Present? Yes No X		` ,				<del>-</del> 6)						
Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (F22)  Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks)  Dark Surface (S7)  3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if observed):  Type: roots  Depth (inches): 3 Hydric Soil Present? Yes No X											1777, 170	, 1430)
Stripped Matrix (S6)											<del>-</del> 22)	
Dark Surface (S7)  3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if observed):  Type: roots  Depth (inches): 3 Hydric Soil Present? Yes No X						-,					,	
3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if observed):  Type: roots  Depth (inches): 3 Hydric Soil Present? Yes No X					, ,					,		
Restrictive Layer (if observed):           Type:         roots           Depth (inches):         3           Hydric Soil Present?         Yes No _X		,										
Type:         roots           Depth (inches):         3           Hydric Soil Present?         Yes No _X	<sup>3</sup> Indicators of	of hydrophytic vegetat	ion and w	etland hydrology mu	ist be p	resent, ur	nless dist	urbed or problematic.				
Depth (inches):         3         Hydric Soil Present?         Yes         No         X	Restrictive	Layer (if observed):										
	Type:	root	S									
	Depth (	inches):	3					Hydric Soil Prese	nt?	Yes	No_	X
	Remarks:											

Project/Site: Laurel Lakes	City/County: Hudson/Summit Sampling Date: 8/16/22
Applicant/Owner: RDL Architects	State: OH Sampling Point: 14
Investigator(s): Emily Nagle, Lindsey Jakovljevic	Section, Township, Range:
	relief (concave, convex, none): Concave Slope %: 3
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.243280°	Long: -81.474826° Datum: NAD 83
Soil Map Unit Name: CcB	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N significantly disturb	<del></del>
Are Vegetation N, Soil N, or Hydrology N naturally problems	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydrophytic Vegetation Present?  Hydric Soil Present?  Yes X No Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: W-O
Remarks: (Explain alternative procedures here or in a separate report.)	
Tremaine. (Explain alternative procedures here of in a separate reports)	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	X Surface Soil Cracks (B6)
Surface Water (A1)X Water-Stained Leaves (B	B9) X Drainage Patterns (B10)
High Water Table (A2)  Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (	(C1) Crayfish Burrows (C8)
Sediment Deposits (B2)  Oxidized Rhizospheres of	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron	on (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)Recent Iron Reduction in	n Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	ks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (inches):	: <u></u> -
Water Table Present? Yes No X Depth (inches):	: <u></u> -
Saturation Present? Yes X No Depth (inches):	:0 Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
Demorke	
Remarks:	

# **VEGETATION** – Use scientific names of plants.

Tree Stratum     (Plot size:	
Number of Dominant Species	
2. dastas stotos	(A)
3. Quercus rubra 10 No FACU Tatal Number of Demisors	(/ //
4. Acer saccharum 5 No FACU Species Across All Strata: 7	(B)
	``
6 Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4%	(A/B)
7. Prevalence Index worksheet:	
75 =Total Cover Total % Cover of: Multiply by	/:
Sapling/Shrub Stratum (Plot size: OBL species 30 x 1 = 30	
1. Crataegus pruinosa 10 Yes UPL FACW species 115 x 2 = 23	)
2. <i>Quercus rubra</i> 10 Yes FACU FAC species 0 x 3 = 0	
3. Fraxinus pennsylvanica 15 Yes FACW FACU species 35 x 4 = 14	)
4 UPL species10 x 5 =50	
5 Column Totals: 190 (A) 45	(B)
6 Prevalence Index = B/A =2.37	
7. Hydrophytic Vegetation Indicators:	
1 - Rapid Test for Hydrophytic Vegetation	ı
Herb Stratum (Plot size:)	
1. <u>Leersia virginica</u> 40 Yes <u>FACW</u> X 3 - Prevalence Index is ≤3.0 <sup>1</sup>	
2. <u>Juncus effusus</u> 30 Yes OBL 4 - Morphological Adaptations¹ (Provide s	
3. Symphyotrichum ericoides 10 No FACU data in Remarks or on a separate she	et)
4 Problematic Hydrophytic Vegetation <sup>1</sup> (Ex	plain)
5 Indicators of hydric soil and wetland hydrological field in the soil and the soil	gy must
6 be present, unless disturbed or problematic.	
7 Definitions of Vegetation Strata:	
8 Tree – Woody plants 3 in. (7.6 cm) or more in	ı
9 diameter at breast height (DBH), regardless of	of height.
10 Sapling/shrub – Woody plants less than 3 in	. DBH
11 and greater than or equal to 3.28 ft (1 m) tall.	
12 Herb – All herbaceous (non-woody) plants, re	
=Total Cover of size, and woody plants less than 3.28 ft tal	
Woody Vine Stratum (Plot size:) Woody vines – All woody vines greater than	3.28 ft in
1 height.	
2 Hydrophytic	
3 Vegetation	
4 Present? Yes X No	
=Total Cover	
Remarks: (Include photo numbers here or on a separate sheet.)	

Sampling Point:

14

Depth	Matrix	to the dep		ı <b>ment ti</b> c Featur		ator or c	onfirm the absence o	T Indicators.)
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-8	10YR 2/2	90	10YR 5/4	10	С	M	Mucky Loam/Clay	Distinct redox concentrations
8-20	10YR 5/1	80	10YR 6/6	20	С	PL/M	Mucky Loam/Clay	Prominent redox concentrations
<sup>1</sup> Type: C=C	oncentration, D=Depl	etion RM	-Reduced Matrix M	 IS_Mas	 ked San	d Grains	<sup>2</sup> l ocation: P	L=Pore Lining, M=Matrix.
Hydric Soil  Histosol  Histic Ep  Black Hi  Hydroge  Stratified  X Depleted  Thick Da  Sandy N  Sandy R  Stripped  Dark Su	Indicators:  (A1) Dipedon (A2) Stic (A3) En Sulfide (A4) Did Layers (A5) Did Below Dark Surface Eark Surface (A12) Mucky Mineral (S1) Dieyed Matrix (S4) Diedox (S5) Di Matrix (S6) I Matrix (S6) Ifface (S7)	: (A11)	Polyvalue Belo MLRA 149B) Thin Dark Surfa High Chroma S Loamy Mucky I Loamy Gleyed Depleted Matrix X Redox Dark Su Depleted Dark Redox Depress Marl (F10) (LRI	w Surfa ace (S9) ands (S Mineral Matrix ( ( (F3) rface (F Surface sions (Fi	ce (S8) (l ) (LRR R 611) (LRI (F1) (LRI F2) (F6) (F7)	LRR R, , MLRA R K, L) R K, L)	Indicators for 2 cm Mu 2 cm Mu Coast Pi 5 cm Mu Polyvalu Thin Dar Iron-Mar Piedmor Mesic Si Red Par Very Sha	or Problematic Hydric Soils <sup>3</sup> :  ack (A10) (LRR K, L, MLRA 149B)  rairie Redox (A16) (LRR K, L, R)  acky Peat or Peat (S3) (LRR K, L, R)  be Below Surface (S8) (LRR K, L)  rk Surface (S9) (LRR K, L)  rganese Masses (F12) (LRR K, L, R)  at Floodplain Soils (F19) (MLRA 149B)  podic (TA6) (MLRA 144A, 145, 149B)  ent Material (F21)  allow Dark Surface (F22)  Explain in Remarks)
Type: Depth (i	Layer (if observed):nches):						Hydric Soil Presei	nt? Yes <u>X</u> No
Remarks:								

Project/Site: Laurel Lakes	City/County: Hudson/Summit Sampling Date: 8/16/22
Applicant/Owner: RDL Architects	State: OH Sampling Point: 15
Investigator(s): Emily Nagle, Lindsey Jakovljevic	Section, Township, Range:
	relief (concave, convex, none): none Slope %: 2
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.244238°	Long: -81.475253° Datum: NAD 83
Soil Map Unit Name: BhB	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N significantly disturb	<del></del>
Are Vegetation N, Soil N, or Hydrology N naturally problema	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No X	Is the Sampled Area
Hydric Soil Present?  Yes  No X	within a Wetland? Yes No_X_
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	
(	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (I	
High Water Table (A2)  Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3)  Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1)  Hydrogen Sulfide Odor (	
Sediment Deposits (B2)  Oxidized Rhizospheres of	
Drift Deposits (B3)  Presence of Reduced Iro	
Algal Mat or Crust (B4)  Recent Iron Reduction in	<u> </u>
Iron Deposits (B5)  Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (inches):	
Water Table Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches):	
(includes capillary fringe)	Wettand Trydrology Freschi: FesNoX
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections) if available:
Bosonbe recorded Bata (officially gauge, monitoring well, dental prictos, pre	wiodo inopositorioj, ii dvalidate.
Remarks:	

# **VEGETATION** – Use scientific names of plants.

Number of Dominant Species				
That Are OBL, FACW, or FAC: 2 (A)  Total Number of Dominant Species Across All Strata: 7 (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 28.6% (A/B)  Prevalence Index worksheet:  Total % Cover of: Multiply by:  OBL species 0 x 1 = 0  FACW species 15 x 2 = 30  FAC species 60 x 3 = 180  FACU species 115 x 4 = 460  UPL species 10 x 5 = 50  Column Totals: 200 (A) 720 (B)				
Total Number of Dominant Species Across All Strata: 7 (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 28.6% (A/B)  Prevalence Index worksheet:  Total % Cover of: Multiply by:  OBL species 0 x 1 = 0  FACW species 15 x 2 = 30  FAC species 60 x 3 = 180  FACU species 115 x 4 = 460  UPL species 10 x 5 = 50  Column Totals: 200 (A) 720 (B)				
Species Across All Strata:         7         (B)           Percent of Dominant Species That Are OBL, FACW, or FAC:         28.6%         (A/B)           Prevalence Index worksheet:           Total % Cover of:         Multiply by:           OBL species         0         x 1 =         0           FACW species         15         x 2 =         30           FAC species         60         x 3 =         180           FACU species         115         x 4 =         460           UPL species         10         x 5 =         50           Column Totals:         200         (A)         720         (B)				
Percent of Dominant Species That Are OBL, FACW, or FAC: 28.6% (A/B)  Prevalence Index worksheet:  Total % Cover of: Multiply by:  OBL species 0 x 1 = 0  FACW species 15 x 2 = 30  FAC species 60 x 3 = 180  FACU species 115 x 4 = 460  UPL species 10 x 5 = 50  Column Totals: 200 (A) 720 (B)				
That Are OBL, FACW, or FAC: 28.6% (A/B)           Prevalence Index worksheet:           Total % Cover of:         Multiply by:           OBL species         0         x 1 = 0           FACW species         15         x 2 = 30           FAC species         60         x 3 = 180           FACU species         115         x 4 = 460           UPL species         10         x 5 = 50           Column Totals:         200         (A)         720         (B)				
Prevalence Index worksheet:           Total % Cover of:         Multiply by:           OBL species         0         x 1 = 0           FACW species         15         x 2 = 30           FAC species         60         x 3 = 180           FACU species         115         x 4 = 460           UPL species         10         x 5 = 50           Column Totals:         200         (A)         720         (B)				
OBL species       0       x 1 =       0         FACW species       15       x 2 =       30         FAC species       60       x 3 =       180         FACU species       115       x 4 =       460         UPL species       10       x 5 =       50         Column Totals:       200       (A)       720       (B)				
OBL species       0       x 1 =       0         FACW species       15       x 2 =       30         FAC species       60       x 3 =       180         FACU species       115       x 4 =       460         UPL species       10       x 5 =       50         Column Totals:       200       (A)       720       (B)				
FACW species       15       x 2 =       30         FAC species       60       x 3 =       180         FACU species       115       x 4 =       460         UPL species       10       x 5 =       50         Column Totals:       200       (A)       720       (B)				
FAC species       60       x 3 =       180         FACU species       115       x 4 =       460         UPL species       10       x 5 =       50         Column Totals:       200       (A)       720       (B)				
UPL species         10         x 5 =         50           Column Totals:         200         (A)         720         (B)				
Column Totals: 200 (A) 720 (B)				
<b></b>				
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic Vegetation				
2 - Dominance Test is >50%				
3 - Prevalence Index is ≤3.0 <sup>1</sup>				
4 - Morphological Adaptations <sup>1</sup> (Provide supporting				
data in Remarks or on a separate sheet)				
Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)				
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Definitions of Vegetation Strata:				
-				
Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.				
Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.				
- Name All banks account (nam was als ) misses a manadian				
<ul> <li>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</li> </ul>				
Was du vines All woods wines greater than 2.29 ft in				
<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.				
Hydrophytic				
- Vegetation Present? Yes No X				
-   110301				

Sampling Point:

15

Depth	rofile Description: (Describe to the depth needed to document the indicator or depth Matrix Redox Features				ator or co	onfirm the absence of indicators.)			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-3	10YR 4/2	95	10YR 5/4	5		M	Loamy/Clayey		
	· <del></del>								
<sup>1</sup> Type: C=C	oncentration, D=Dep	letion, RI	/=Reduced Matrix, N	MS=Mas	ked San	d Grains.	<sup>2</sup> Location: PL=Por	e Lining, M=Matrix.	
Hydric Soil								blematic Hydric Soils <sup>3</sup> :	
Histosol	(A1)		Polyvalue Belo	ow Surfa	ce (S8) (	LRR R,	2 cm Muck (A1	0) (LRR K, L, MLRA 14	<b>9B</b> )
Histic E	pipedon (A2)		MLRA 149B	3)			Coast Prairie F	Redox (A16) (LRR K, L, F	R)
	istic (A3)		Thin Dark Surf				149B)5 cm Mucky Pe	eat or Peat (S3) (LRR K,	, L, R)
	en Sulfide (A4)		High Chroma S			-		w Surface (S8) (LRR K,	L)
	d Layers (A5)	(* )	Loamy Mucky			R K, L)		ace (S9) (LRR K, L)	
	d Below Dark Surface	e (A11)	Loamy Gleyed		(F2)			se Masses (F12) (LRR K	
	ark Surface (A12)  Mucky Mineral (S1)		Depleted Matri Redox Dark St		E6)			dplain Soils (F19) ( <b>MLR<i>i</i></b> TA6) ( <b>MLRA 144A, 145</b> ,	
	Gleyed Matrix (S4)		Depleted Dark				Red Parent Ma		, 1430)
	Redox (S5)		Redox Depres					Dark Surface (F22)	
	Matrix (S6)		Marl (F10) (LR		٠,		Other (Explain	` '	
	ırface (S7)			, ,				,	
	,								
<sup>3</sup> Indicators o	of hydrophytic vegetat	tion and v	vetland hydrology m	ust be p	resent, u	nless dist	turbed or problematic.		
Restrictive	Layer (if observed):								
Type:	roo	ts							
Depth (i	nches):	3					Hydric Soil Present?	Yes No	Χ
Remarks:	·								

Project/Site: Laurel Lakes	City/County: Hudson/Summit Sampling Date: 8/16/22						
Applicant/Owner: RDL Architects	State: OH Sampling Point: 16						
Investigator(s): Emily Nagle, Lindsey Jakovljevic	Section, Township, Range:						
• '	relief (concave, convex, none): Concave Slope %: 0						
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.244529°	Long: -81.474681° Datum: NAD 83						
Soil Map Unit Name: BhB	NWI classification:						
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)						
Are Vegetation N, Soil N, or Hydrology N significantly distur							
<del></del>							
Are Vegetation N, Soil N, or Hydrology N naturally problem.  SUMMARY OF FINDINGS – Attach site map showing sam							
	<u> </u>						
Hydrophytic Vegetation Present?  Yes X No	Is the Sampled Area						
Hydric Soil Present?  Yes X No  Walter the delegate Present?	within a Wetland? Yes X No						
Wetland Hydrology Present? Yes X No Remarks: (Explain alternative procedures here or in a separate report.)	If yes, optional Wetland Site ID: W-N						
HYDROLOGY							
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)						
Primary Indicators (minimum of one is required; check all that apply)	X Surface Soil Cracks (B6)						
Surface Water (A1)X Water-Stained Leaves (	(B9) X Drainage Patterns (B10)						
High Water Table (A2)  Aquatic Fauna (B13)	Moss Trim Lines (B16)						
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)						
X Water Marks (B1) Hydrogen Sulfide Odor	(C1) Crayfish Burrows (C8)						
Sediment Deposits (B2)  X Oxidized Rhizospheres	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)						
Drift Deposits (B3) Presence of Reduced Ir	ron (C4) Stunted or Stressed Plants (D1)						
Algal Mat or Crust (B4)Recent Iron Reduction i	n Tilled Soils (C6) X Geomorphic Position (D2)						
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)						
l <del></del>							
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)						
Field Observations:							
Surface Water Present? Yes No X Depth (inches)	4						
Water Table Present? Yes No X Depth (inches)	c						
Saturation Present? Yes X No Depth (inches)	: 3 Wetland Hydrology Present? Yes X No						
(includes capillary fringe)							
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pro	evious inspections), if available:						
Remarks:							

### **VEGETATION** – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
Fraxinus pennsylvanica	40	Yes	FACW	
Populus deltoides	20	Yes	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
3. Acer rubrum	15	No	FAC	
4. Crataegus pruinosa	10	No	UPL	Total Number of Dominant Species Across All Strata: 4 (B)
5. Malus coronaria	10	No	UPL	Percent of Deminant Species
6.				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
7.				Prevalence Index worksheet:
	95	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:)				OBL species30 x 1 =30
Fraxinus pennsylvanica	15	Yes	FACW	FACW species 123 x 2 = 246
2.				FAC species 35 x 3 = 105
3.				FACU species 2 x 4 = 8
4.				UPL species 20 x 5 = 100
5.				Column Totals: 210 (A) 489 (B)
6.				Prevalence Index = B/A = 2.33
7.				Hydrophytic Vegetation Indicators:
	15	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: )				X 2 - Dominance Test is >50%
Phalaris arundinacea	60	Yes	FACW	X 3 - Prevalence Index is ≤3.0 <sup>1</sup>
2. Boehmeria cylindrica	15	No	OBL	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
3. Juncus effusus	15	No	OBL	data in Remarks or on a separate sheet)
4. Leersia virginica	8	No	FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Symphyotrichum ericoides	2	No	FACU	<u></u>
6.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7.				Definitions of Vegetation Strata:
8.				Tree West plants 2 in (7.6 am) or many in
9.				<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
10.				Continuate Weeds plants less than 2 in DDL
11.				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
12.				Harb. All barbassaya (non woody) planta regardless
	100	=Total Cover		<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: )				Woody vines All woody vines greater than 2.29 ft in
1.				Woody vines – All woody vines greater than 3.28 ft in height.
2.				-
3.				Hydrophytic
4.				Vegetation Present? Yes X No
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)			
- (	220)			

Sampling Point: 16

Depth	Matrix	io ine de	•	Featu		1101 01 0	onfirm the absence o	i mulcators.)
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-10	10YR 3/1	95	7.5YR 5/6	5	С	М	Mucky Loam/Clay	Prominent redox concentrations
10-20	10YR 4/1	80	7.5YR 5/6	20	<u>C</u>	<u>M</u>	Mucky Loam/Clay	Prominent redox concentrations
-								
1								
1Tuno: C. C	anapatration D. Donl	lation DA	A Doduced Metrix N				21 apption: D	N. Doro Lining M. Motriy
Hydric Soil	oncentration, D=Depl Indicators:	etion, Riv	/I=Reduced Matrix, IV	i5=ivias	sked Sand	Grains		PL=Pore Lining, M=Matrix.  or Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)		Polyvalue Belo	w Surfa	ace (S8) (I	LRR R,	2 cm Mu	uck (A10) (LRR K, L, MLRA 149B)
Histic E <sub>l</sub>	pipedon (A2)		MLRA 149B)				Coast P	rairie Redox (A16) (LRR K, L, R)
	istic (A3)		Thin Dark Surfa					ucky Peat or Peat (S3) (LRR K, L, R)
	en Sulfide (A4)		High Chroma S			-		ie Below Surface (S8) ( <b>LRR K, L</b> )
	d Layers (A5)		Loamy Mucky N			R K, L)		rk Surface (S9) (LRR K, L)
	d Below Dark Surface	e (A11)	Loamy Gleyed		(F2)			nganese Masses (F12) (LRR K, L, R)
	ark Surface (A12)		Depleted Matrix	` '	<b>-</b> 0\			nt Floodplain Soils (F19) (MLRA 149B)
	Mucky Mineral (S1)		X Redox Dark Su					podic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
	Gleyed Matrix (S4) Redox (S5)		Depleted Dark Redox Depress					ent Material (F21) allow Dark Surface (F22)
	Matrix (S6)		Marl (F10) (LRI		0)			Explain in Remarks)
	rface (S7)		IMAII (I 10) (LIKI	<b>Χ ΙΧ, Δ</b> )			Other (E	Apiaiii iii Neiliaiks)
<sup>3</sup> Indicators o	f hydrophytic vegetat	ion and v	vetland hydrology mu	ıst be p	resent, ur	nless dis	sturbed or problematic.	
Restrictive	Layer (if observed):							
Type:								
Depth (i	nches):						Hydric Soil Prese	nt? Yes_X_ No
Remarks:								

Project/Site: Laurel Lakes	City/County: Hudson/Summit Sampling Date: 8/16/22							
Applicant/Owner: RDL Architects	State: OH Sampling Point: 17							
Investigator(s): Emily Nagle, Lindsey Jakovljevic	Section, Township, Range:							
	relief (concave, convex, none): Concave Slope %: 0							
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.244924°	Long: -81.474689° Datum: NAD 83							
Soil Map Unit Name: CcB	NWI classification:							
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)							
Are Vegetation N, Soil N, or Hydrology N significantly distur								
Are Vegetation N , Soil N , or Hydrology N naturally problem.								
SUMMARY OF FINDINGS – Attach site map showing sam								
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area							
Hydric Soil Present?  Yes X No	within a Wetland? Yes X No							
Wetland Hydrology Present?  Yes X No	If yes, optional Wetland Site ID: W-M							
Remarks: (Explain alternative procedures here or in a separate report.)								
HYDROLOGY								
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)							
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)							
Surface Water (A1) X Water-Stained Leaves (	(B9) X Drainage Patterns (B10)							
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)							
Saturation (A3) — Marl Deposits (B15)	Dry-Season Water Table (C2)							
Water Marks (B1) Hydrogen Sulfide Odor								
Sediment Deposits (B2)  X Oxidized Rhizospheres								
Drift Deposits (B3) Presence of Reduced Ir								
Algal Mat or Crust (B4)  Recent Iron Reduction i								
	Thin Muck Surface (C7)Shallow Aquitard (D3)							
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rema								
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)							
Field Observations:								
Surface Water Present? Yes No X Depth (inches)								
Water Table Present? Yes No X Depth (inches)								
Saturation Present? Yes X No Depth (inches)	:1 Wetland Hydrology Present? Yes X No							
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, pro								
Describe Recorded Data (stream gauge, monitoring well, aerial priotos, pri	evious inspections), ii available.							
Remarks:								

## **VEGETATION** – Use scientific names of plants.

3. Aesculus flava 10 No FACU Total Number of Dominant	A) B) A/B)
2. Fraxinus pennsylvanica 20 Yes FACW That Are OBL, FACW, or FAC: 7 ( 3. Aesculus flava 10 No FACU Total Number of Dominant Species That Are OBL, FACW, or FAC: 7 ( Total Number of Dominant Species Across All Strata: 7 (	В)
3. Aesculus flava 10 No FACU Total Number of Dominant Species Across All Strata: 7 (	В)
4. Nyssa sylvatica 10 No FAC Species Across All Strata: 7 (	ŕ
5. Percent of Dominant Species	A/B) -
——————————————————————————————————————	A/B) - -
6 That Are OBL, FACW, or FAC: 100.0% (	-
7. Prevalence Index worksheet:	-
80 =Total Cover Total % Cover of: Multiply by:	_
<u>Sapling/Shrub Stratum</u> (Plot size:) OBL species45 x 1 =45	
1. <i>Quercus palustris</i> 15 Yes FACW FACW species 110 x 2 = 220	
2. FAC species 35 x 3 = 105	
3. FACU species 10 x 4 = 40	
4. UPL species 0 x 5 = 0	-
5. Column Totals: 200 (A) 410	(B)
6. Prevalence Index = B/A = 2.05	- 1
7. Hydrophytic Vegetation Indicators:	
15 =Total Cover 1 - Rapid Test for Hydrophytic Vegetation	
Herb Stratum (Plot size: ) X 2 - Dominance Test is >50%	
1. Athyrium angustum 20 Yes FAC X 3 - Prevalence Index is ≤3.0 <sup>1</sup>	
2. Osmundastrum cinnamomeum 20 Yes FACW 4 - Morphological Adaptations <sup>1</sup> (Provide supp	orting
3. Impatiens capensis 10 No FACW data in Remarks or on a separate sheet)	
4. Dryopteris cristata 10 No OBL Problematic Hydrophytic Vegetation <sup>1</sup> (Explain	i)
F. Pochmaria autindrica	
6. Leersia oryzoides  15  16  17  18  18  19  19  19  19  10  10  10  10  10  10	ust
7. Onoclea sensibilis 5 No FACW Definitions of Vegetation Strata:	
8 Persicaria sanittata 5 No ORI	
9. Toxicodendron radicans  5 No FAC  Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of he	ight.
10.	
11. Sapling/shrub – Woody plants less than 3 in. DB and greater than or equal to 3.28 ft (1 m) tall.	_
42	
Herb – All herbaceous (non-woody) plants, regard of size, and woody plants less than 3.28 ft tall.	iless
Woody Vine Stratum (Plot size:)  Woody vines _ All woody vines greater than 3.28	et in
1/ Woody vines — All woody vines greater than 3.28 height.	It in
2.	
3. Hydrophytic	
4. Vegetation Present? Yes X No	
=Total Cover	
Remarks: (Include photo numbers here or on a separate sheet.)	

Sampling Point:

17

Depth	Matrix	io ino ao <sub>l</sub>		c Featu			onfirm the absence o	indicators.)	
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-4	10YR 2/1	100					Mucky Loam/Clay		
4-20	10YR 6/1	70	10YR 6/8	30	С	M	Mucky Loam/Clay	Prominent redox concentrations	
1									
1									
<sup>1</sup> Type: C=C	oncentration, D=Depl	etion, RM	=Reduced Matrix, M	1S=Mas	sked Sand	d Grains	. <sup>2</sup> Location: F	PL=Pore Lining, M=Matrix.	
Hydric Soil								or Problematic Hydric Soils <sup>3</sup> :	
Histosol			Polyvalue Belo		ıce (S8) ( <b>I</b>	LRR R,		uck (A10) (LRR K, L, MLRA 149B)	
	pipedon (A2) istic (A3)		MLRA 149B) Thin Dark Surfa		) (I RR R	MIRA		rairie Redox (A16) (LRR K, L, R) ucky Peat or Peat (S3) (LRR K, L, R)	
	en Sulfide (A4)		High Chroma S					ue Below Surface (S8) (LRR K, L)	
	d Layers (A5)		Loamy Mucky I			-		rk Surface (S9) (LRR K, L)	
	d Below Dark Surface	(A11)	Loamy Gleyed			, ,		nganese Masses (F12) (LRR K, L, R)	
	ark Surface (A12)	, ,	Depleted Matrix					nt Floodplain Soils (F19) ( <b>MLRA 149B</b> )	
Sandy N	Mucky Mineral (S1)		Redox Dark Su	rface (F	<del>-</del> 6)		Mesic S	podic (TA6) ( <b>MLRA 144A, 145, 149B</b> )	
Sandy C	Sleyed Matrix (S4)		Depleted Dark	Surface	e (F7)		Red Parent Material (F21)		
	Redox (S5)		Redox Depress		(8)			allow Dark Surface (F22)	
	Matrix (S6)		Marl (F10) ( <b>LR</b>	R K, L)			Other (E	Explain in Remarks)	
Dark Su	rface (S7)								
<sup>3</sup> Indicators o	f hydrophytic vegetat	ion and w	etland hydrology mu	ist be p	resent, ur	nless dis	sturbed or problematic.		
	Layer (if observed):		, 0,	·	<u> </u>		· .		
Type:									
Depth (i	nches):						Hydric Soil Prese	nt? Yes <u>X</u> No	
Remarks:									

Project/Site: Laurel Lakes	City/County: Hudson/Summit Sampling Date: 8/16/22
Applicant/Owner: RDL Architects	State: OH Sampling Point: 18
Investigator(s): Emily Nagle, Lindsey Jakovljevic	Section, Township, Range:
	relief (concave, convex, none): none Slope %: 2
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.244850°	Long: -81.475010° Datum: NAD 83
Soil Map Unit Name: CcB	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year?	
Are Vegetation N , Soil N , or Hydrology N significantly distur	
Are Vegetation N, Soil N, or Hydrology N naturally problems  SUMMARY OF FINDINGS – Attach site map showing sam	
The second secon	
Hydrophytic Vegetation Present?  Yes No X	Is the Sampled Area
Hydric Soil Present? Yes No X	within a Wetland? Yes No _X
Wetland Hydrology Present? Yes No _X	If yes, optional Wetland Site ID:
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (	B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (	i i i i i i i i i i i i i i i i i i i
Sediment Deposits (B2)  Oxidized Rhizospheres	
Drift Deposits (B3) Presence of Reduced In	
Algal Mat or Crust (B4)  Recent Iron Reduction in	
Iron Deposits (B5) Thin Muck Surface (C7)	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	<del></del>
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No _X Depth (inches):	: <u></u>
Water Table Present? Yes No X Depth (inches):	: <u></u>
Saturation Present? Yes No X Depth (inches):	: Wetland Hydrology Present? Yes No _X
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
Remarks:	

<b>VEGETATION</b> – Use scientific names of p	plants.	Sampling Point:

Tara Otastana (Plataina	Absolute	Dominant	Indicator	Barriana Tarturalahari
Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test worksheet:
1. Acer rubrum	50	Yes	FAC	Number of Dominant Species
2. Quercus rubra	15	Yes	FACU	That Are OBL, FACW, or FAC:3(A)
3				Total Number of Dominant
4.				Species Across All Strata: 6 (B)
5				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 50.0% (A/B)
7				Prevalence Index worksheet:
	65	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:)				OBL species 0 x 1 = 0
1. Acer rubrum	10	Yes	FAC	FACW species 0 x 2 = 0
2.				FAC species 75 x 3 = 225
3.				FACU species 55 x 4 = 220
A				UPL species 0 x 5 = 0
5.				Column Totals: 130 (A) 445 (B)
6				Prevalence Index = B/A = 3.42
7.				Hydrophytic Vegetation Indicators:
·	10	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Harb Christian (District	10	= Total Cover		
Herb Stratum (Plot size:)	00	.,	E4011	2 - Dominance Test is >50%
1. Poa pratensis	20	Yes	FACU	3 - Prevalence Index is ≤3.0¹
2. Solidago canadensis	15	Yes	FACU	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
3. <u>Toxicodendron radicans</u>	15	Yes	FAC	
4. Rosa multiflora	5	No	FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
7				Definitions of Vegetation Strata:
8				Tree – Woody plants 3 in. (7.6 cm) or more in
9.				diameter at breast height (DBH), regardless of height.
10.				Sapling/shrub – Woody plants less than 3 in. DBH
11.				and greater than or equal to 3.28 ft (1 m) tall.
12.				Harb All harbaceaus (non woods) plants regardless
	55	=Total Cover		<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: )		•		
1.				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
2				g.m
				Hydrophytic
4.				Vegetation   Present?   Yes   No X
4.		Tatal Cause		Present? Yes No X
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)			

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Depth	cription: (Describe t Matrix	to the de	-	<b>ument ti</b> x Featur		ator or co	onfirm the absence of indic	cators.)	
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0-20	10YR 3/2	95	10YR 5/4	5	С	M	Loamy/Clayey		
-									
-									
-									
<sup>1</sup> Type: C=C	oncentration, D=Depl	letion, RN	/I=Reduced Matrix, N	/IS=Mas	ked San	d Grains.	<sup>2</sup> Location: PL=Por	e Lining, M=Matrix.	
Hydric Soil	Indicators:						Indicators for Pro	blematic Hydric Soils <sup>3</sup> :	
Histosol	, ,		Polyvalue Belo		ce (S8) (	LRR R,		10) (LRR K, L, MLRA 149	•
	pipedon (A2)		MLRA 149B					Redox (A16) (LRR K, L, R	
	stic (A3)		Thin Dark Surf					eat or Peat (S3) (LRR K, I	
	en Sulfide (A4)		High Chroma S			-		ow Surface (S8) (LRR K, L	-)
	d Layers (A5) d Below Dark Surface	Δ(Δ11)	Loamy Mucky Loamy Gleyed			K K, L)		ace (S9) (LRR K, L) se Masses (F12) (LRR K,	I R)
	ark Surface (A12)	<i>(</i> // 11)	Depleted Matri		1 2)			dplain Soils (F19) (MLRA	
	Mucky Mineral (S1)		Redox Dark Su		<del>-</del> 6)			(TA6) ( <b>MLRA 144A, 145</b> ,	
	Gleyed Matrix (S4)		Depleted Dark				Red Parent Ma		- /
	Redox (S5)		Redox Depress					Dark Surface (F22)	
Stripped	Matrix (S6)		Marl (F10) (LR	R K, L)			Other (Explain	in Remarks)	
Dark Su	rface (S7)								
2									
			vetland hydrology mu	ıst be pı	resent, u	nless dist	urbed or problematic.		
	Layer (if observed):								
Type:									
Depth (i	nches):						Hydric Soil Present?	Yes No	<u>X</u>
Remarks:									

Project/Site: Laurel Lakes	City/County: Hudson/Summit Sampling Date: 8/16/22						
Applicant/Owner: RDL Architects	State: OH Sampling Point: 19						
Investigator(s): Emily Nagle, Lindsey Jakovljevic	Section, Township, Range:						
	relief (concave, convex, none): Concave Slope %: 1						
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.241435°	Long: -81.472480° Datum: NAD 83						
Soil Map Unit Name: Ca	NWI classification:						
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)						
Are Vegetation N , Soil N , or Hydrology N significantly disturb	· — —						
Are Vegetation N, Soil N, or Hydrology N naturally problems  SUMMARY OF FINDINGS – Attach site map showing sam							
/ / / / / / / / / / / / / / / / / / /							
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area						
Hydric Soil Present? Yes X No	within a Wetland? Yes X No No						
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: W-T						
HYDROLOGY							
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)						
Surface Water (A1)  X Water-Stained Leaves (B	X Surface Soil Cracks (B6)  X Drainage Patterns (B10)						
High Water Table (A2)  Aquatic Fauna (B13)	Moss Trim Lines (B16)						
Saturation (A3)  Marl Deposits (B15)	Dry-Season Water Table (C2)						
Water Marks (B1)  Water Marks (B1)  Hydrogen Sulfide Odor (							
Sediment Deposits (B2)  Oxidized Rhizospheres of							
Drift Deposits (B3)  Presence of Reduced Iro							
Algal Mat or Crust (B4)  Recent Iron Reduction in	<u> </u>						
Iron Deposits (B5)  Thin Muck Surface (C7)							
	Other (Explain in Remarks)  X Microtopographic Relief (D4)						
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)						
Field Observations:							
Surface Water Present? Yes No X Depth (inches):  Water Table Present? Yes No X Depth (inches):							
Saturation Present? Yes No X Depth (inches):							
(includes capillary fringe)	Welland Hydrology Freschit: Fes No						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:						
Remarks:							

## **VEGETATION** – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size:	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Quercus palustris	30	Yes	FACW	
Fraxinus pennsylvanica	20	Yes	FACW	Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)
3. Acer rubrum	10	No	FAC	
4. Ulmus rubra	10	No	FAC	Total Number of Dominant Species Across All Strata: 5 (B)
5.				<u> </u>
6.				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
7				Prevalence Index worksheet:
	70	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:)				OBL species 57 x 1 = 57
1. Quercus palustris	15	Yes	FACW	FACW species 65 x 2 = 130
2. Fraxinus pennsylvanica			FACW	FAC species 40 x 3 = 120
3.				FACU species10 x 4 =40
4.				UPL species0 x 5 =0
5.				Column Totals: 172 (A) 347 (B)
6.				Prevalence Index = B/A = 2.02
7.				Hydrophytic Vegetation Indicators:
	15	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: )				X 2 - Dominance Test is >50%
Glyceria striata	50	Yes	OBL	X 3 - Prevalence Index is ≤3.0 <sup>1</sup>
Toxicodendron radicans	20	Yes	FAC	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
3. Rosa multiflora	10	No	FACU	data in Remarks or on a separate sheet)
4. Juncus effusus	5	No	OBL	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5. Persicaria sagittata	2	No	OBL	
6				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7				Definitions of Vegetation Strata:
8				Tree – Woody plants 3 in. (7.6 cm) or more in
9.				diameter at breast height (DBH), regardless of height.
10.			-	Sapling/shrub – Woody plants less than 3 in. DBH
11.				and greater than or equal to 3.28 ft (1 m) tall.
12				Herb – All herbaceous (non-woody) plants, regardless
	87	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size:)				<b>Woody vines</b> – All woody vines greater than 3.28 ft in
1.				height.
2.				
3.				Hydrophytic Vegetation
4.				Present? Yes X No
		=Total Cover		
Remarks: (Include photo numbers here or on a separ				1
(morale prote name of or or a separ	a.c ccc,			

Sampling Point:

19

inches)	Matrix	0/		x Featur		12	Tandore	Daws
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-20	10YR 3/1	85	7.5YR 5/6	15	С	М	Mucky Loam/Clay	Prominent redox concentrations
							<u> </u>	
ype: C=Con	ncentration, D=Deple	tion, RM	=Reduced Matrix, M	1S=Mas	ked Sand	d Grains.		=Pore Lining, M=Matrix.
ydric Soil In								r Problematic Hydric Soils <sup>3</sup> :
Histosol (A			Polyvalue Belo		ce (S8) (I	LRR R,		ck (A10) (LRR K, L, MLRA 149B)
_	pedon (A2)		MLRA 149B)					airie Redox (A16) (LRR K, L, R)
Black Hist	` '		Thin Dark Surfa					cky Peat or Peat (S3) (LRR K, L, R
_	Sulfide (A4)		High Chroma S			-		Below Surface (S8) (LRR K, L)
	_ayers (A5)	(	Loamy Mucky I			K K, L)		Surface (S9) (LRR K, L)
	Below Dark Surface ( k Surface (A12)	(A11)	Loamy Gleyed		F2)			ganese Masses (F12) ( <b>LRR K, L, R</b>
	cky Mineral (S1)		Z Redox Dark Su		·6)			: Floodplain Soils (F19) ( <b>MLRA 149</b> odic (TA6) ( <b>MLRA 144A, 145, 149</b> l
	eyed Matrix (S4)		Depleted Dark					nt Material (F21)
Sandy Re			Redox Depress					llow Dark Surface (F22)
Stripped N	, ,		Marl (F10) (LR	•	-,			plain in Remarks)
Oark Surfa				, ,				,
	, ,							
ndicators of h	nydrophytic vegetatio	n and w	etland hydrology mu	ıst be pı	resent, ur	nless dist	turbed or problematic.	
estrictive La	yer (if observed):							
Type:								
Depth (inc	:hes):						Hydric Soil Present	t? Yes_X_ No
emarks:							l	

Project/Site: Laurel Lakes	City/County: Hudson/Summit Sampling Date: 8/16/22
Applicant/Owner: RDL Architects	State: OH Sampling Point: 20
Investigator(s): Emily Nagle, Lindsey Jakovljevic	Section, Township, Range:
	relief (concave, convex, none): concave Slope %: 0
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.241171°	Long: -81.471988° Datum: NAD 83
Soil Map Unit Name: Ca	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year?	
, ,	Yes X No (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N significantly disturb	<del></del>
Are Vegetation N, Soil N, or Hydrology N naturally problems	atic? (If needed, explain any answers in Remarks.)
<b>SUMMARY OF FINDINGS – Attach site map showing sam</b>	pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No X	Is the Sampled Area
Hydrophytic Vegetation Present?  Hydric Soil Present?  Yes  No X  Yes  No X	within a Wetland? Yes No X
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	
(2-pain anomaine precedures note of in a coparate repetin)	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (E	
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3)  Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1)  Hydrogen Sulfide Odor (	
Sediment Deposits (B2) Oxidized Rhizospheres of the control of the	
Drift Deposits (B3) Presence of Reduced Iro	
Algal Mat or Crust (B4)  Recent Iron Reduction in	
Iron Deposits (B5) Thin Muck Surface (C7)	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remar	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (inches):	
Water Table Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes No _X
(includes capillary fringe)	wise in an estimate of a callebia.
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
Remarks:	

### **VEGETATION** – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Acer rubrum	15	Yes	FAC	
Nyssa sylvatica	10	Yes	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Tsuga canadensis	5	No	FACU	
Pinus strobus	5	No	FACU	Total Number of Dominant Species Across All Strata: 6 (B)
5.		110	TACO	Species Across Air Strata.
6.				Percent of Dominant Species That Are OBL, FACW, or FAC:(66.7%(A/B)
7				Prevalence Index worksheet:
	35	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:)				OBL species0 x 1 =0
1. Frangula alnus	10	Yes	FAC	FACW species 0 x 2 = 0
2				FAC species95 x 3 =285
3.				FACU species 80 x 4 = 320
4.				UPL species 0 x 5 = 0
5.				Column Totals: 175 (A) 605 (B)
6.				Prevalence Index = B/A = 3.46
7.		·		Hydrophytic Vegetation Indicators:
	10	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: )				X 2 - Dominance Test is >50%
Alopecurus pratensis	60	Yes	FAC	3 - Prevalence Index is ≤3.0 <sup>1</sup>
Poa pratensis	30	Yes	FACU	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
Solidago canadensis	10	No	FACU	data in Remarks or on a separate sheet)
Solidago altissima	10	No	FACU	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
	5			Problematic Hydrophytic Vegetation (Explain)
<ul><li>5. Sorghum halepense</li><li>6.</li></ul>	<u>5</u>	No	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7.				Definitions of Vegetation Strata:
8.				Tree – Woody plants 3 in. (7.6 cm) or more in
9.				diameter at breast height (DBH), regardless of height.
10.				Continue (church Woody plants loss than 2 in DDI
11.				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
12.				
	115	=Total Cover		<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: )		<u>-</u>		
Parthenocissus quinquefolia	15	Yes	FACU	Woody vines – All woody vines greater than 3.28 ft in height.
2.				- roignii
3.				Hydrophytic
4.				Vegetation Present? Yes No X
T	15	=Total Cover		165 <u>~</u> 165 <u>~</u>
	•	•		
Remarks: (Include photo numbers here or on a separ	ate sheet.)			

Sampling Point: 20

		% C	Color (moist) 10YR 5/4	%					
0-20	10YR 3/2	95	10YR 5/4		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	3
				5	С	М	Loamy/Clayey		
			_						
			_	·					
Type: C=Concent	tration D-Depletic	n RM-Re	duced Matrix N	/S-Mas	ked Sand	d Grains	<sup>2</sup> Location: PL=Pore	Lining M-Matri	iv
Hydric Soil Indica		ni, rawi–rac	adoca Matrix, II	no-mas	nea can	a Oramo.	Indicators for Prob		
Histosol (A1)			Polyvalue Belo	w Surfac	ce (S8) (I	LRR R,	2 cm Muck (A10	-	
Histic Epipedo	n (A2)		MLRA 149B		`	•	Coast Prairie Re		
Black Histic (A			Thin Dark Surf	ace (S9)	(LRR R	, MLRA 1			
Hydrogen Sulfi	ide (A4)		High Chroma S	Sands (S	11) (LRF	R K, L)	Polyvalue Below	V Surface (S8) (I	LRR K, L)
Stratified Laye	rs (A5)		Loamy Mucky	Mineral (	(F1) ( <b>LR</b> I	R K, L)	Thin Dark Surfa	ce (S9) ( <b>LRR K</b> ,	, L)
Depleted Belov	w Dark Surface (A	11)	Loamy Gleyed	Matrix (	F2)		Iron-Manganese	Masses (F12)	(LRR K, L, R
Thick Dark Sur	rface (A12)		Depleted Matri	x (F3)			Piedmont Flood	plain Soils (F19)	(MLRA 149
Sandy Mucky I			Redox Dark Su				Mesic Spodic (T		A, 145, 149E
Sandy Gleyed			Depleted Dark				Red Parent Mat		
Sandy Redox (			Redox Depress	•	3)		Very Shallow Da		2)
Stripped Matrix	` '		Marl (F10) (LR	R K, L)			Other (Explain in	n Remarks)	
Dark Surface (	57)								
3Indicators of hydro	onhytic vegetation	and wetlar	nd hydrology mi	ist he nr	asant III	nlace diet	urbed or problematic.		
Restrictive Layer		and wettar	ia nyarology mi	ust be pi	CSCIII, UI	iicaa diat	arbea or problematic.		
Type:	( 0.000.100).								
Depth (inches)							Hydric Soil Present?	Yes	No X
	·						Tryunc don't resent:		<u> </u>
Remarks:									

Project/Site: Laurel Lakes	City/County: Hudson/Summit Sampling Date: 8/16/22
Applicant/Owner: RDL Architects	State: OH Sampling Point: 21
Investigator(s): Emily Nagle, Lindsey Jakovljevic	Section, Township, Range:
	relief (concave, convex, none): Concave Slope %: 0
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.241456°	Long: -81.470398° Datum: NAD 83
Soil Map Unit Name: FcB	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N significantly distur	
Are Vegetation N, Soil N, or Hydrology N naturally problems	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present?  Yes X No	If yes, optional Wetland Site ID: W-U
Remarks: (Explain alternative procedures here or in a separate report.)	yes, epasial visualis etc. 12.
Remarks. (Explain alternative procedures here of in a separate report.)	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (	B9) X Drainage Patterns (B10)
High Water Table (A2)  Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (	
Sediment Deposits (B2)  Oxidized Rhizospheres	
Drift Deposits (B3)  Presence of Reduced Ire	
Algal Mat or Crust (B4)  Recent Iron Reduction in	
Iron Deposits (B5)  Thin Muck Surface (C7)	· · · · · · · · · · · · · · · · · · ·
Inundation Visible on Aerial Imagery (B7)  Other (Explain in Remark Carries (C7)	
X Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
	(AC-Neutral Test (D3)
Field Observations:	
Surface Water Present? Yes No X Depth (inches):	
Water Table Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches):	: Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
Remarks:	

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test	worksheet:			
1. Acer rubrum	40	Yes	FAC	Number of Domir	ant Species			
2. Quercus palustris	30	Yes	FACW	That Are OBL, FA			4	(A)
3. <u>Ulmus rubra</u> 4.	10	No	FAC	Total Number of Species Across A			4	_(B)
5. 5.				Percent of Domin That Are OBL, FA	•	1	00.0%	_(A/B)
7				Prevalence Inde	x worksheet:			
	80	=Total Cover		Total % Cov	/er of:	Mu	Itiply by:	
Sapling/Shrub Stratum (Plot size:	)			OBL species	0	x 1 = _	0	
1. Fraxinus pennsylvanica	20	Yes	FACW	FACW species	65	x 2 = _	130	
2				FAC species	50	x 3 = _	150	
3.				FACU species	0	x 4 = _	0	
4				UPL species	0	x 5 = _	0	
5				Column Totals:	115	(A)	280	(B)
6				Prevalence	e Index = B/A	·=	2.43	
7				Hydrophytic Veg	getation Indic	ators:		
	20	=Total Cover		1 - Rapid Tes	st for Hydroph	ytic Ve	getation	
Herb Stratum (Plot size:)				X 2 - Dominano	ce Test is >50°	%		

4.				Species Across All Strata:	4 (B)
5.				Percent of Dominant Species	
6				That Are OBL, FACW, or FAC:	100.0% (A/B)
7				Prevalence Index worksheet:	
<u>.</u>	80	_=Total Cover		Total % Cover of:	Multiply by:
Sapling/Shrub Stratum (Plot size:)				OBL species 0 x 1	=0
Fraxinus pennsylvanica	20	Yes	FACW	FACW species 65 x 2 :	= 130
2.		_		FAC species50 x 3 :	= 150
3.				FACU species 0 x 4	= 0
4				UPL species 0 x 5	= 0
5				Column Totals: 115 (A)	(B)
6				Prevalence Index = B/A =	2.43
7.				Hydrophytic Vegetation Indicator	rs:
	20	=Total Cover		1 - Rapid Test for Hydrophytic	Vegetation
Herb Stratum (Plot size:)				X 2 - Dominance Test is >50%	
1. Onoclea sensibilis	15	Yes	FACW	X 3 - Prevalence Index is ≤3.0 <sup>1</sup>	
2.				4 - Morphological Adaptations <sup>1</sup>	(Provide supporting
3.				data in Remarks or on a sep	arate sheet)
4.				Problematic Hydrophytic Veget	ation¹ (Explain)
5				<sup>1</sup> Indicators of hydric soil and wetlan	
6				be present, unless disturbed or prol	blematic.
7				Definitions of Vegetation Strata:	
8				Tree – Woody plants 3 in. (7.6 cm)	or more in
9				diameter at breast height (DBH), re	gardless of height.
10				Sapling/shrub – Woody plants less	s than 3 in. DBH
11				and greater than or equal to 3.28 ft	(1 m) tall.
12				Herb – All herbaceous (non-woody	) plants, regardless
	15	_=Total Cover		of size, and woody plants less than	3.28 ft tall.
Woody Vine Stratum (Plot size:)				Woody vines – All woody vines gre	eater than 3.28 ft in
1				height.	
2				Hydrophytic	
3				Vegetation	
4		_			lo
		=Total Cover			
Remarks: (Include photo numbers here or on a separa	ate sheet.	)			

Depth	Matrix	io tile de		k Featur		1101 01 0	onfirm the absence o	i mulcutors.)
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-2	10YR 4/2	100						Organic Matter
2-18	10YR 5/2	80	7.5YR 4/6	20	C	M	Mucky Loam/Clay	Prominent redox concentrations
1- 0.0							2	
Type: C=C  Hydric Soil	oncentration, D=Depl	etion, RM	l=Reduced Matrix, N	IS=Mas	sked Sand	d Grains		PL=Pore Lining, M=Matrix.  or Problematic Hydric Soils <sup>3</sup> :
Histosol			Polyvalue Belo	w Surfa	ice (S8) (l	LRR R.		uck (A10) (LRR K, L, MLRA 149B)
	pipedon (A2)		MLRA 149B		.00 (00) (.	,		rairie Redox (A16) ( <b>LRR K, L, R</b> )
	stic (A3)		Thin Dark Surfa	ace (S9	) (LRR R	, MLRA		ucky Peat or Peat (S3) (LRR K, L, R)
Hydroge	en Sulfide (A4)		High Chroma S	ands (S	S11) ( <b>LRF</b>	R K, L)	Polyvalu	ie Below Surface (S8) (LRR K, L)
	d Layers (A5)		Loamy Mucky I			R K, L)		rk Surface (S9) (LRR K, L)
	d Below Dark Surface	e (A11)	Loamy Gleyed		(F2)			nganese Masses (F12) (LRR K, L, R)
	ark Surface (A12)		X Depleted Matrix		<b>-0</b> )			nt Floodplain Soils (F19) (MLRA 149B)
	Mucky Mineral (S1)		Redox Dark Su					podic (TA6) ( <b>MLRA 144A, 145, 149B</b> )
	Gleyed Matrix (S4) Redox (S5)		Depleted Dark Redox Depress					rent Material (F21) allow Dark Surface (F22)
	Matrix (S6)		Marl (F10) (LR		0)			explain in Remarks)
	rface (S7)			···, —,				, , , , , , , , , , , , , , , , , , ,
			etland hydrology mu	ist be pi	resent, ur	nless dis	turbed or problematic.	
Type:	Layer (if observed):							
Depth (ii	nchos):						Hydric Soil Prese	nt? Yes X No
							Tryunc 30111 rese	Tes A NO
Remarks:								

Project/Site: Laurel Lakes	City/County: Hudson/Summit Sampling Date: 8/16/22
Applicant/Owner: RDL Architects	State: OH Sampling Point: 21
Investigator(s): Emily Nagle, Lindsey Jakovljevic	Section, Township, Range:
• • • • • • • • • • • • • • • • • • • •	relief (concave, convex, none): none Slope %: 2
Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.244850°	Long: -81.475010° Datum: NAD 83
Soil Map Unit Name: CcB	NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation N, Soil N, or Hydrology N significantly disturb	<del></del>
Are Vegetation N, Soil N, or Hydrology N naturally problema	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	pling point locations, transects, important features, etc.
Lhidraphitia Vagatatian Dragant?	Is the Sampled Area
Hydrophytic Vegetation Present?  Hydric Soil Present?  Yes No X  No X	within a Wetland? Yes No X
Wetland Hydrology Present?  Yes  No X	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.)	
Tremains. (Explain alternative procedures here of in a separate report.)	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leaves (E	· · · · · · · · · · · · · · · · · · ·
High Water Table (A2)  Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (	(C1) Crayfish Burrows (C8)
Sediment Deposits (B2)  Oxidized Rhizospheres of	on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iro	on (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in	n Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remark	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (inches):	
Water Table Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes No X
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:
Remarks:	

/EGETATION – Use scientific names				Sampling Point: 21	
Tree Stratum (Plot size:)	Absolute  % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. Ulmus americana	10	Yes	FACW	Number of Dominant Species	
2. Quercus palustris	10	Yes	FACW	•	(A)
3				Total Number of Dominant	
1				Species Across All Strata: 4	(B)
5.				Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0%	(A/B)
<i>.</i>				Prevalence Index worksheet:	
	20	=Total Cover		Total % Cover of: Multiply by:	_
Sapling/Shrub Stratum (Plot size:	)			OBL species 5 x 1 = 5	
. Rhamnus alnifolia	5	Yes	OBL	FACW species 20 x 2 = 40	
2.				FAC species 0 x 3 = 0	_
3.				FACU species105 x 4 =420	_
4				UPL species 0 x 5 = 0	_
5				Column Totals: 130 (A) 465	_ (B)
6				Prevalence Index = B/A = 3.58	_
7.				Hydrophytic Vegetation Indicators:	
	5	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation	
Herb Stratum (Plot size:)				X 2 - Dominance Test is >50%	
1. Poa pratensis	70	Yes	FACU	3 - Prevalence Index is ≤3.0 <sup>1</sup>	
2. Taraxacum officinale	20	No	FACU	4 - Morphological Adaptations <sup>1</sup> (Provide supp	oorting
3. Trifolium repens	15	No	FACU	data in Remarks or on a separate sheet)	
4				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain	n)
5 6				<sup>1</sup> Indicators of hydric soil and wetland hydrology me be present, unless disturbed or problematic.	nust
7.				Definitions of Vegetation Strata:	
8				Tree – Woody plants 3 in. (7.6 cm) or more in	
9				diameter at breast height (DBH), regardless of he	eight.
10 11.				Sapling/shrub – Woody plants less than 3 in. DE and greater than or equal to 3.28 ft (1 m) tall.	ЗН
12.					
12.	105	=Total Cover		<b>Herb</b> – All herbaceous (non-woody) plants, regar of size, and woody plants less than 3.28 ft tall.	rdless
Woody Vine Stratum (Plot size:1.	)			<b>Woody vines</b> – All woody vines greater than 3.2 height.	8 ft in
2.					
3.				Hydrophytic Vegetation	

=Total Cover

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

0-20 10YR 3/2 95 10YR 5/4 5 C M Loamy/Clayey  Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.  Location: PL=Pore Lining, M=Matrix.	1 Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Gr.  Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)  Polyvalue Below Surface (S8) (LRR ML MLRA 149B) Thin Dark Surface (S9) (LRR R, ML High Chroma Sands (S11) (LRR K, Loamy Mucky Mineral (F1) (LRR K, Loamy Mucky Mineral (F1) (LRR K, Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7)	M Loamy/Clayey  2 Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils3: (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 14 Coast Prairie Redox (A16) (LRR K, L, IR, MLRA 149B) RR K, L) 5 cm Mucky Peat or Peat (S3) (LRR K, RR K, L) Polyvalue Below Surface (S8) (LRR K, RR K, L) Thin Dark Surface (S9) (LRR K, L)
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.   ^2Location: PL=Pore Lining, M=Matrix.       Indicators:	Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Gr.  Hydric Soil Indicators:  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Polyvalue Below Surface (S8) (LRR ML High Chroma Sands (S11) (LRR K, Loamy Mucky Mineral (F1) (LRR K, Loamy Mucky Mineral (F1) (LRR K, Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F7)	nd Grains.  2 Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils <sup>3</sup> : (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 14 Coast Prairie Redox (A16) (LRR K, L, IR, MLRA 14 Coast Prairie Redox (A16) (LRR K, L, IR, MLRA 149B)
lydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histosol (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thick Dark Surface (A12) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Dark Surface (S7)  Indicators for Problematic Hydric Soils 3:  2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)  1 coast Prairie Redox (A16) (LRR K, L, R)  2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)  5 cm Mucky Peat or Peat (S3) (LRR K, L, R)  5 cm Mucky Peat or Peat (S3) (LRR K, L, R)  5 cm Mucky Peat or Peat (S3) (LRR K, L, R)  5 cm Mucky Peat or Peat (S3) (LRR K, L, R)  5 cm Mucky Peat or Peat (S3) (LRR K, L, R)  5 cm Mucky Peat or Peat (S3) (LRR K, L, R)  5 cm Mucky Peat or Peat (S3) (LRR K, L, R)  5 cm Mucky Peat or Peat (S3) (LRR K, L, R)  5 cm Mucky Peat or Peat (S3) (LRR K, L, R)  5 cm Mucky Peat or Peat (S3) (LRR K, L, R)  5 cm Mucky Peat or Peat (S3) (LRR K, L, R)  5 cm Mucky Peat or Peat (S3) (LRR K, L, R)  5 cm Mucky Peat or Peat (S3) (LRR K, L, R)  5 cm Mucky Peat or Peat (S3) (LRR K, L, R)  5 cm Mucky Peat or Peat (S3) (LRR K, L, R)  1 change of Polyation (A10) (LRR K, L)  1 change of Polyation (A10) (LRR K, L)  2 cm Mucky Peat or Peat (S3) (LRR K, L, R)  1 change of Polyation (A10) (LRR K, L)  2 cm Mucky Peat or Peat (S3) (LRR K, L, R)  1 change of Polyation (A10) (LRR K, L)  2 cm Mucky Peat or Peat (S3) (LRR K, L, R)  2 cm Mucky Peat or Peat (S3) (LRR K, L, R)  2 cm Mucky Peat or Peat (S3) (LRR K, L, R)  2 cm Mucky Peat or Peat (S3) (LRR K, L, R)  2 cm Mucky Peat or Peat (S3) (LRR K, L, R)  2 cm Mucky Peat or Peat (S3) (LRR K, L)  Polyation (S4) (	Hydric Soil Indicators:  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Polyvalue Below Surface (S8) (LRR R, ML High Chroma Sands (S11) (LRR K, Loamy Mucky Mineral (F1) (LRR K, Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Depleted Dark Surface (F7)	Indicators for Problematic Hydric Soils <sup>3</sup> :  (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 14  Coast Prairie Redox (A16) (LRR K, L, I  R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, I  Polyvalue Below Surface (S8) (LRR K, I  Thin Dark Surface (S9) (LRR K, L)
ydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histosol (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thick Dark Surface (A12) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F6) Mesic Spodic (TA6) (MLRA 144A, 145, 149 Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Dark Surface (S7)  Indicators for Problematic Hydric Soils :  Indicators for Problematic Hydric Soils :  2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)  2 cm Muck (A10) (LRR K, L, R) Coast Prairie Redox (A16) (LRR K, L, R) Delyaclus Peacy of Peat (S3) (LRR K, L, R) Thin Dark Surface (S9) (LRR K, L, L) Thin Dark Surface (S1) (LRR K, L) Thin Dark	ydric Soil Indicators:  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Polyvalue Below Surface (S8) (LRR R, ML High Chroma Sands (S11) (LRR K, Loamy Mucky Mineral (F1) (LRR K, Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Depleted Dark Surface (F7)	Indicators for Problematic Hydric Soils <sup>3</sup> :  (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 14  Coast Prairie Redox (A16) (LRR K, L, I  R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, I  Polyvalue Below Surface (S8) (LRR K, I  Thin Dark Surface (S9) (LRR K, L)
ydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B)  Histic Epipedon (A2)  MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, R)  Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  S cm Mucky Peat or Peat (S3) (LRR K, L, R)  Hydrogen Sulfide (A4)  High Chroma Sands (S11) (LRR K, L)  Stratified Layers (A5)  Loamy Mucky Mineral (F1) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Depleted Below Dark Surface (A11)  Loamy Gleyed Matrix (F2)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F7)  Sandy Redox (S5)  Redox Depressions (F8)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Other (Explain in Remarks)  Marl (F10) (LRR K, L)  Hydric Soil Present?  Yes  No  X	ydric Soil Indicators:  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Polyvalue Below Surface (S8) (LRR R, ML High Chroma Sands (S11) (LRR K, Loamy Mucky Mineral (F1) (LRR K, Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Depleted Dark Surface (F7)	Indicators for Problematic Hydric Soils <sup>3</sup> :  (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 14  Coast Prairie Redox (A16) (LRR K, L, I  R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, I  Polyvalue Below Surface (S8) (LRR K, I  Thin Dark Surface (S9) (LRR K, L)
ydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histosol (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thick Dark Surface (A12) Depleted Matrix (F3) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Marl (F10) (LRR K, L) Stripped Matrix (S6) Marl (F10) (LRR K, L) Stripped Matrix (S6) Marl (F10) (LRR K, L) Marl (F10) (LRR K, L) Marl (F10) (LRR K, L) Mesic Spodic (TA6) (MLRA 144A, 145, 149) Sandy Mucky Mineral (S1) Sandy Redox (S5) Redox Depressions (F8) Marl (F10) (LRR K, L) Mar	ydric Soil Indicators:  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Polyvalue Below Surface (S8) (LRR R, ML High Chroma Sands (S11) (LRR K, Loamy Mucky Mineral (F1) (LRR K, Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Depleted Dark Surface (F7)	Indicators for Problematic Hydric Soils <sup>3</sup> :  (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 14  Coast Prairie Redox (A16) (LRR K, L, I  R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, I  Polyvalue Below Surface (S8) (LRR K, I  Thin Dark Surface (S9) (LRR K, L)
ydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histosol (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thick Dark Surface (A12) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F6) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Marl (F10) (LRR K, L) Derivative Augusta (F10) (LRR K, L) Derivative Augusta (F12) Sandy Redox (S5) Redox Depressions (F8) Derivative Augusta (F10) (LRR K, L) Derivative Augusta (F12) Sandy Redox (S5) Stripped Matrix (S6) Marl (F10) (LRR K, L) Derivative Augusta (F12) Derivative Aug	ydric Soil Indicators:  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Polyvalue Below Surface (S8) (LRR R, ML High Chroma Sands (S11) (LRR K, Loamy Mucky Mineral (F1) (LRR K, Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Sandy Gleyed Matrix (S4)  Polyvalue Below Surface (S8) (LRR R, ML High Chroma Sands (S11) (LRR K, Loamy Mucky Mineral (F1) (LRR K, Loamy Gleyed Matrix (F2)  Depleted Dark Surface (F6)	Indicators for Problematic Hydric Soils <sup>3</sup> :  (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 14  Coast Prairie Redox (A16) (LRR K, L, I  R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, I  Polyvalue Below Surface (S8) (LRR K, I  Thin Dark Surface (S9) (LRR K, L)
ydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B)  Histic Epipedon (A2)  MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, R)  Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  S cm Mucky Peat or Peat (S3) (LRR K, L, R)  Hydrogen Sulfide (A4)  High Chroma Sands (S11) (LRR K, L)  Stratified Layers (A5)  Loamy Mucky Mineral (F1) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Depleted Below Dark Surface (A11)  Loamy Gleyed Matrix (F2)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F7)  Sandy Redox (S5)  Redox Depressions (F8)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Other (Explain in Remarks)  Marl (F10) (LRR K, L)  Hydric Soil Present?  Yes  No  X	ydric Soil Indicators:  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Polyvalue Below Surface (S8) (LRR R, ML High Chroma Sands (S11) (LRR K, Loamy Mucky Mineral (F1) (LRR K, Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Depleted Dark Surface (F7)	Indicators for Problematic Hydric Soils <sup>3</sup> :  (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 14  Coast Prairie Redox (A16) (LRR K, L, I  R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, I  Polyvalue Below Surface (S8) (LRR K, I  Thin Dark Surface (S9) (LRR K, L)
ydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histosol (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thick Dark Surface (A12) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F6) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Marl (F10) (LRR K, L) Derk Surface (S7) Meric Soil Present? Meric Soil Present? Mucky Mineral (B1) Meric Soil Present? Mucky Mineral (B2) Meric Soil Present? Mucky Mineral (B2) Meric Soil Present? Mucky Mineral (B3) Meric Soil Present? Mucky Mineral (B4) Mucky Mineral (B4) Meric Soil Present? Mucky Mineral (B4) Mucky Mineral (B4) Meric Soil Present? Mucky Mineral (B4) Mucky Mineral (B4) Meric Soil Present? Mucky Mineral (B4) Mucky Mineral (B4) Meric Soil Present? Mucky Mineral (B4) Mucky Mineral (B4) Mucky Mineral (B4) Mucky Mineral (B4) Meric Soil Present? Mucky Mineral (B4)	ydric Soil Indicators:  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Polyvalue Below Surface (S8) (LRR R, ML High Chroma Sands (S11) (LRR K, Loamy Mucky Mineral (F1) (LRR K, Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Depleted Dark Surface (F7)	Indicators for Problematic Hydric Soils <sup>3</sup> :  (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 14  Coast Prairie Redox (A16) (LRR K, L, I  R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, I  Polyvalue Below Surface (S8) (LRR K, I  Thin Dark Surface (S9) (LRR K, L)
ydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) S cm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) High Chroma Sands (S11) (LRR K, L) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Loamy Gleyed Matrix (F2) Thick Dark Surface (A12) Depleted Matrix (F3) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (F22) Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks)  Dark Surface (S7)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Bright Soil Present? Yes No X	ydric Soil Indicators:  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Polyvalue Below Surface (S8) (LRR R, ML High Chroma Sands (S11) (LRR K, Loamy Mucky Mineral (F1) (LRR K, Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Depleted Dark Surface (F7)	Indicators for Problematic Hydric Soils <sup>3</sup> :  (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 14  Coast Prairie Redox (A16) (LRR K, L, I  R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, I  Polyvalue Below Surface (S8) (LRR K, I  Thin Dark Surface (S9) (LRR K, L)
ydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) S cm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) High Chroma Sands (S11) (LRR K, L) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Loamy Gleyed Matrix (F2) Thick Dark Surface (A12) Depleted Matrix (F3) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (F22) Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks)  Dark Surface (S7)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Bright Soil Present? Yes No X	ydric Soil Indicators:  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Polyvalue Below Surface (S8) (LRR R, ML High Chroma Sands (S11) (LRR K, Loamy Mucky Mineral (F1) (LRR K, Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Depleted Dark Surface (F7)	Indicators for Problematic Hydric Soils <sup>3</sup> :  (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 14  Coast Prairie Redox (A16) (LRR K, L, I  R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, I  Polyvalue Below Surface (S8) (LRR K, I  Thin Dark Surface (S9) (LRR K, L)
ydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histosol (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thick Dark Surface (A12) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F6) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Marl (F10) (LRR K, L) Derk Surface (S7) Meric Soil Present? Meric Soil Present? Mucky Mineral (B1) Meric Soil Present? Mucky Mineral (B2) Meric Soil Present? Mucky Mineral (B2) Meric Soil Present? Mucky Mineral (B3) Meric Soil Present? Mucky Mineral (B4) Mucky Mineral (B4) Meric Soil Present? Mucky Mineral (B4) Mucky Mineral (B4) Meric Soil Present? Mucky Mineral (B4) Mucky Mineral (B4) Meric Soil Present? Mucky Mineral (B4) Mucky Mineral (B4) Meric Soil Present? Mucky Mineral (B4) Mucky Mineral (B4) Mucky Mineral (B4) Mucky Mineral (B4) Meric Soil Present? Mucky Mineral (B4)	ydric Soil Indicators:  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Polyvalue Below Surface (S8) (LRR R, ML High Chroma Sands (S11) (LRR K, Loamy Mucky Mineral (F1) (LRR K, Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Depleted Dark Surface (F7)	Indicators for Problematic Hydric Soils <sup>3</sup> :  (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 14  Coast Prairie Redox (A16) (LRR K, L, I  R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, I  Polyvalue Below Surface (S8) (LRR K, I  Thin Dark Surface (S9) (LRR K, L)
ydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histosol (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thick Dark Surface (A12) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F6) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Marl (F10) (LRR K, L) Derk Surface (S7) Meric Soil Present? Meric Soil Present? Mucky Mineral (B1) Meric Soil Present? Mucky Mineral (B2) Meric Soil Present? Mucky Mineral (B2) Meric Soil Present? Mucky Mineral (B3) Meric Soil Present? Mucky Mineral (B4) Mucky Mineral (B4) Meric Soil Present? Mucky Mineral (B4) Mucky Mineral (B4) Meric Soil Present? Mucky Mineral (B4) Mucky Mineral (B4) Meric Soil Present? Mucky Mineral (B4) Mucky Mineral (B4) Meric Soil Present? Mucky Mineral (B4) Mucky Mineral (B4) Mucky Mineral (B4) Mucky Mineral (B4) Meric Soil Present? Mucky Mineral (B4)	ydric Soil Indicators:  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Polyvalue Below Surface (S8) (LRR R, ML High Chroma Sands (S11) (LRR K, Loamy Mucky Mineral (F1) (LRR K, Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Depleted Dark Surface (F7)	Indicators for Problematic Hydric Soils <sup>3</sup> :  (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 14  Coast Prairie Redox (A16) (LRR K, L, I  R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, I  Polyvalue Below Surface (S8) (LRR K, I  Thin Dark Surface (S9) (LRR K, L)
ydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, Histosol (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thick Dark Surface (A12) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Depleted Dark Surface (F6) Sandy Redox (S5) Redox Depressions (F8) Stripped Matrix (S6) Marl (F10) (LRR K, L) Derk Surface (S7) Meric Soil Present? Meric Soil Present? Mucky Mineral (B1) Meric Soil Present? Mucky Mineral (B2) Meric Soil Present? Mucky Mineral (B2) Meric Soil Present? Mucky Mineral (B3) Meric Soil Present? Mucky Mineral (B4) Mucky Mineral (B4) Meric Soil Present? Mucky Mineral (B4) Mucky Mineral (B4) Meric Soil Present? Mucky Mineral (B4) Mucky Mineral (B4) Meric Soil Present? Mucky Mineral (B4) Mucky Mineral (B4) Meric Soil Present? Mucky Mineral (B4) Mucky Mineral (B4) Mucky Mineral (B4) Mucky Mineral (B4) Meric Soil Present? Mucky Mineral (B4)	ydric Soil Indicators:  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Polyvalue Below Surface (S8) (LRR R, ML High Chroma Sands (S11) (LRR K, Loamy Mucky Mineral (F1) (LRR K, Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Depleted Dark Surface (F7)	Indicators for Problematic Hydric Soils <sup>3</sup> :  (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 14  Coast Prairie Redox (A16) (LRR K, L, I  R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, I  Polyvalue Below Surface (S8) (LRR K, I  Thin Dark Surface (S9) (LRR K, L)
ydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) S cm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) High Chroma Sands (S11) (LRR K, L) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Loamy Gleyed Matrix (F2) Thick Dark Surface (A12) Depleted Matrix (F3) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (F22) Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks)  Dark Surface (S7)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Bright Soil Present? Yes No X	ydric Soil Indicators:  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Polyvalue Below Surface (S8) (LRR R, ML High Chroma Sands (S11) (LRR K, Loamy Mucky Mineral (F1) (LRR K, Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Depleted Dark Surface (F7)	Indicators for Problematic Hydric Soils <sup>3</sup> :  (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 14  Coast Prairie Redox (A16) (LRR K, L, I  R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, I  Polyvalue Below Surface (S8) (LRR K, I  Thin Dark Surface (S9) (LRR K, L)
ydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B)  Histic Epipedon (A2)  MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, R)  Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  S cm Mucky Peat or Peat (S3) (LRR K, L, R)  Hydrogen Sulfide (A4)  High Chroma Sands (S11) (LRR K, L)  Stratified Layers (A5)  Loamy Mucky Mineral (F1) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Depleted Below Dark Surface (A11)  Loamy Gleyed Matrix (F2)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F7)  Sandy Redox (S5)  Redox Depressions (F8)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Other (Explain in Remarks)  Marl (F10) (LRR K, L)  Hydric Soil Present?  Yes  No  X	ydric Soil Indicators:  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Polyvalue Below Surface (S8) (LRR R, ML High Chroma Sands (S11) (LRR K, Loamy Mucky Mineral (F1) (LRR K, Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Depleted Dark Surface (F7)	Indicators for Problematic Hydric Soils <sup>3</sup> :  (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 14  Coast Prairie Redox (A16) (LRR K, L, I  R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, I  Polyvalue Below Surface (S8) (LRR K, I  Thin Dark Surface (S9) (LRR K, L)
ydric Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B) Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) S cm Mucky Peat or Peat (S3) (LRR K, L, R) Hydrogen Sulfide (A4) High Chroma Sands (S11) (LRR K, L) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Loamy Gleyed Matrix (F2) Thick Dark Surface (A12) Depleted Matrix (F3) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (F22) Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks)  Dark Surface (S7)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Bright Soil Present? Yes No X	ydric Soil Indicators:  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Polyvalue Below Surface (S8) (LRR R, ML High Chroma Sands (S11) (LRR K, Loamy Mucky Mineral (F1) (LRR K, Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Depleted Dark Surface (F7)	Indicators for Problematic Hydric Soils <sup>3</sup> :  (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 14  Coast Prairie Redox (A16) (LRR K, L, I  R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, I  Polyvalue Below Surface (S8) (LRR K, I  Thin Dark Surface (S9) (LRR K, L)
ydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B)  Histic Epipedon (A2)  MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, R)  Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  S cm Mucky Peat or Peat (S3) (LRR K, L, R)  Hydrogen Sulfide (A4)  High Chroma Sands (S11) (LRR K, L)  Stratified Layers (A5)  Loamy Mucky Mineral (F1) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Depleted Below Dark Surface (A11)  Loamy Gleyed Matrix (F2)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F7)  Sandy Redox (S5)  Redox Depressions (F8)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Other (Explain in Remarks)  Marl (F10) (LRR K, L)  Hydric Soil Present?  Yes  No  X	ydric Soil Indicators:  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Polyvalue Below Surface (S8) (LRR R, ML High Chroma Sands (S11) (LRR K, Loamy Mucky Mineral (F1) (LRR K, Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Depleted Dark Surface (F7)	Indicators for Problematic Hydric Soils <sup>3</sup> :  (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 14  Coast Prairie Redox (A16) (LRR K, L, I  R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, I  Polyvalue Below Surface (S8) (LRR K, I  Thin Dark Surface (S9) (LRR K, L)
ydric Soil Indicators:  Histosol (A1)  Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B)  Histic Epipedon (A2)  MLRA 149B)  Coast Prairie Redox (A16) (LRR K, L, R)  Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  S cm Mucky Peat or Peat (S3) (LRR K, L, R)  Hydrogen Sulfide (A4)  High Chroma Sands (S11) (LRR K, L)  Stratified Layers (A5)  Loamy Mucky Mineral (F1) (LRR K, L)  Thin Dark Surface (S9) (LRR K, L)  Depleted Below Dark Surface (A11)  Loamy Gleyed Matrix (F2)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F7)  Sandy Redox (S5)  Redox Depressions (F8)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Other (Explain in Remarks)  Marl (F10) (LRR K, L)  Hydric Soil Present?  Yes  No  X	ydric Soil Indicators:  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Polyvalue Below Surface (S8) (LRR R, ML High Chroma Sands (S11) (LRR K, Loamy Mucky Mineral (F1) (LRR K, Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Depleted Dark Surface (F7)	Indicators for Problematic Hydric Soils <sup>3</sup> :  (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 14  Coast Prairie Redox (A16) (LRR K, L, I  R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, I  Polyvalue Below Surface (S8) (LRR K, I  Thin Dark Surface (S9) (LRR K, L)
Histosol (A1)	Histosol (A1) Polyvalue Below Surface (S8) (LRR MLRA 149B) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Polyvalue Below Surface (S9) (LRR R, ML High Chroma Sands (S11) (LRR K, Loamy Mucky Mineral (F1) (LRR K, Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Sandy Gleyed Matrix (S4) Polyvalue Below Surface (S8) (LRR ML HIGH MICH MICH MICH MICH MICH MICH MICH MIC	2 cm Muck (A10) (LRR K, L, MLRA 14 Coast Prairie Redox (A16) (LRR K, L, I R, MLRA 149B) SRR K, L) Polyvalue Below Surface (S8) (LRR K, I Thin Dark Surface (S9) (LRR K, L)
Histic Epipedon (A2)  MLRA 149B)  Black Histic (A3)  Thin Dark Surface (S9) (LRR R, MLRA 149B)  Stratified (A4)  High Chroma Sands (S11) (LRR K, L)  Stratified Layers (A5)  Loamy Mucky Mineral (F1) (LRR K, L)  Depleted Below Dark Surface (A11)  Loamy Gleyed Matrix (F2)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Redox Dark Surface (F6)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F7)  Sandy Redox (S5)  Redox Depressions (F8)  Stripped Matrix (S6)  Dark Surface (S7)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Hydric Soil Present?  Yes No X	Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  MLRA 149B)  Thin Dark Surface (S9) (LRR R, ML High Chroma Sands (S11) (LRR K, Loamy Mucky Mineral (F1) (LRR K, Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Depleted Dark Surface (F7)	Coast Prairie Redox (A16) (LRR K, L, I  R, MLRA 149B)  5 cm Mucky Peat or Peat (S3) (LRR K,  Polyvalue Below Surface (S8) (LRR K,  Thin Dark Surface (S9) (LRR K, L)
Black Histic (A3)	Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Thin Dark Surface (S9) (LRR R, ML  High Chroma Sands (S11) (LRR K,  Loamy Mucky Mineral (F1) (LRR K,  Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Depleted Dark Surface (F7)	R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, RR K, L) Polyvalue Below Surface (S8) (LRR K, Thin Dark Surface (S9) (LRR K, L)
Hydrogen Sulfide (A4)  High Chroma Sands (S11) (LRR K, L)  Stratified Layers (A5)  Loamy Mucky Mineral (F1) (LRR K, L)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (F2)  Depleted Dark Surface (F6)  Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F7)  Sandy Redox (S5)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Other (Explain in Remarks)  Depth (inches):  Hydric Soil Present?  Yes No X	Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) High Chroma Sands (S11) (LRR K, Loamy Mucky Mineral (F1) (LRR K, Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7)	RR K, L) Polyvalue Below Surface (S8) (LRR K, RR K, L) Thin Dark Surface (S9) (LRR K, L)
Stratified Layers (A5)  Loamy Mucky Mineral (F1) (LRR K, L)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Depleted Matrix (F3)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Redox Depressions (F8)  Other (Explain in Remarks)  Depleted Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Depleted Dark Surface (F22)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Depleted Dark Surface (F22)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Depleted Dark Surface (F22)  Marl (F10) (LRR K, L)  Marl (F10) (LRR K, L)  Depleted Dark Surface (F22)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Hydric Soil Present?  Yes No X	Stratified Layers (A5)  Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Loamy Mucky Mineral (F1) (LRR K, Loamy Gleyed Matrix (F2)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Depleted Dark Surface (F7)	Thin Dark Surface (S9) (LRR K, L)
Depleted Below Dark Surface (A11)  Loamy Gleyed Matrix (F2)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Stripped Matrix (S6)  Dark Surface (S7)  Marl (F10) (LRR K, L)  Mesic Spodic (TA6) (MLRA 144A, 145, 149  Mesic Spodic (TA6) (MLRA 144A, 145	Depleted Below Dark Surface (A11)  Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (F3)  Redox Dark Surface (F6)  Depleted Dark Surface (F7)	
Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Sandy Redox (S5)  Stripped Matrix (S6)  Dark Surface (S7)  Dark Surface (S7)  Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Bestrictive Layer (if observed):  Type:  Depth (inches):  Type:  Depth (inches):  Piedmont Floodplain Soils (F19) (MLRA 144  Mesic Spodic (TA6) (MLRA 144A, 145, 149  Mesic Spodic (TA6) (MLRA 144A, 145  Mesic Spo	Thick Dark Surface (A12)  Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Depleted Matrix (F3)  Redox Dark Surface (F6)  Depleted Dark Surface (F7)	Iron-Manganese Masses (F12) (LRR K
Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Mesic Spodic (TA6) (MLRA 144A, 145, 149 Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7) Red Parent Material (F21) Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (F22) Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks)  Dark Surface (S7)  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	Sandy Mucky Mineral (S1)  Sandy Gleyed Matrix (S4)  Redox Dark Surface (F6)  Depleted Dark Surface (F7)	
Sandy Gleyed Matrix (S4)  Depleted Dark Surface (F7)  Red Parent Material (F21)  Very Shallow Dark Surface (F22)  Stripped Matrix (S6)  Marl (F10) (LRR K, L)  Dark Surface (S7)  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	Sandy Gleyed Matrix (S4) Depleted Dark Surface (F7)	Piedmont Floodplain Soils (F19) (MLRA
Sandy Redox (S5) Redox Depressions (F8) Very Shallow Dark Surface (F22) Stripped Matrix (S6) Marl (F10) (LRR K, L) Other (Explain in Remarks)  Dark Surface (S7)  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		Mesic Spodic (TA6) ( <b>MLRA 144A, 145</b>
Stripped Matrix (S6)	Sandy Redox (S5) Redox Depressions (F8)	Red Parent Material (F21)
Dark Surface (S7) 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		Very Shallow Dark Surface (F22)
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	Stripped Matrix (S6) Marl (F10) (LRR K, L)	Other (Explain in Remarks)
Estrictive Layer (if observed):    Type:	Dark Surface (S7)	
Depth (inches):   Hydric Soil Present?   Yes No _ X		
Type:		unless disturbed or problematic.
Depth (inches): Hydric Soil Present? Yes No X	estrictive Layer (if observed):	
	Type:	
	Depth (inches):	
Cilians.	emarks.	Hydric Soil Present? Yes No
	citains.	Hydric Soil Present? Yes No _
		Hydric Soil Present? Yes No_

## **Background Information**

	<del></del>					
Name:	Name: Emily Nagle					
Date:	8/23/2022					
Affiliation:	CT Consultants					
Address:	8150 Sterling Court, Mentor Ohio					
Phone Number:	440-417-6698					
e-mail address:	enagle@ctconsultants.com					
Name of Wetland:	W-M					
Vegetation Communit(ies):	Forested					
HGM Class(es):	Depressional					
Lat/Long or UTM Coordin	ate	41.245250°				
USGS Quad Name	-81.474501° Hudson					
County	Summit					
City/Township		Hudson				
Section and Subsection	T4N R10W					
Hydrologic Unit Code		041100020401				
Site Visit		8/16/2022				
National Wetland Inventor	у Мар	N/A				
Ohio Wetland Inventory M	lap	N/A				
Soil Survey		СсВ				
Delineation report/map	See Attached					

Name of Wetland:	W-M
Wetland Size (acres, hectares):	0.51 on-site
Sketch: Include north arrow, relationship with other s	urface waters, vegetation zones, etc.
See Attached.	
Comments, Narrative Discussion, Justification of Categor	ry Changes
Comments, Narranive Discussion, Justification of Categori	y Changes.
Final score : 39	Category: CAT MOD 2

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries.

use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	<b>V</b>	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	<b>V</b>	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	V	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	V	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	V	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	V	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

#### **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on Information obtained from the site visit or the literature and by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means

the wetland is listed in the appropriate State of Ohio database.

#	Question	YES	NO	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species?  Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Wetland should be evaluated for possible Category 3 status. Go to Question 2	Go to Question 2	<b>▽</b>
2	<b>Threatened or Endangered Species.</b> Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	Wetland is a Category 3 wetland. Go to Question 3	Go to Question 3	<b>√</b>
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	Wetland is a Category 3 wetland. Go to Question 4	Go to Question 4	<b>√</b>
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland. Go to Question 5	Go to Question 5	<b>V</b>
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Wetland is a Category 3 wetland. Go to Question 6	Go to Question 6	<b>✓</b>
6	<b>Bogs.</b> Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Wetland is a Category 3 wetland. Go to Question 7	Go to Question 7	7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	Wetland is a Category 3 wetland. Go to Question 8	Go to Question 8a	✓
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or o evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Wetland is a Category 3 wetland. Go to Question 8b	Go to Question 8b	<b>✓</b>

8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?		Wetland should be evaluated for possible Category 3 status Go to Question 9a	Go to Question 9a	
9a		I and tributary wetlands. Is the woon the USGS map, adjacent to this accessible to fish?		Go to Question 9b	Go to Question 10
9b	the loss of aquation	s hydrology result from measures de plants, i.e. the wetland is partially hy ard or landward dikes or other hydrol	Wetland should be evaluated for possible Category 3 status Go to Question 9d	Go to Question 9c	
9c	i.e. the wetland is alterations), or the and river influence	er levels the wetland's primary hydro hydrologically unrestricted (no lakew wetland can be characterized as an ed hydrology. These include sandbar buth wetlands, or those dominated by	Go to Question 9d	Go to Question 9d	
9d		have a predominance of native spec ough non-native or disturbance tolera	Wetland is a Category 3 wetland. Go to Question 10	Go to Question 9e	
9e		have a predominance of non-native on its vegetation communities?	Wetland should be evaluated for possible Category 3 status. Go to Question 10	Go to Question 10	
10	Henry, or Wood C description: the water table often water table often water table often water table of the gramineous version of the description o	Prairies (Oak Openings) Is the wet counties and can the wetland be char etland has a sandy substrate with inte within several inches of the surface, a egetation listed in Table 1 (woody spu- of Natural Resources Division of Nat e in confirming this type of wetland an	Wetland is a Category 3 wetland. Go to Question 11	Go to Question 11	
11	or all of the specie Plains (Madison a Marion Counties), portions of wester etc.).	es. Is the wetland a relict wet prairie is in Table 1. Extensive prairies were nd Union Counties), Sandusky Plains northwest Ohio (e.g. Erie, Huron, Lun Ohio Counties (e.g. Darke, Mercer	Wetland should be evaluated for possible Category 3 status. Complete Quantitative Rating.	Complete Quantitative Rating.	
	. Characteristic pl	•	<del> </del>		<del> </del>
Lythrum Myrioph Najas mi Phalaris Phragmi Potamog Ranuncu Rhamnus	arundinacea tes australis eton crispus lus ficaria s frangula agustifolia	fen species  Zvzadenus elezans var. glaucus Cacalia plantaginea Carex flava Carex sterilis Carex stricta Deschampsia caespitosa Eleocharis rostellata Eriophorum viridicarinatum Gentianopsis spn. Lobelia kalmii Parnassia glauca Potentilla fruticosa Rhamnus alnifolia Rhynchospora capillacea Salix candida Salix nerissima Solidago ohioensis Tofieldia glutinosa Triglochin maritimum	bog species  Calla palustris Carex atlantica var. capillacea Carex oligosperma Carex trisperma Chamaedaphne calyculata Decodon verticillatus Eriophorum virginicum Larix laricina Nemopanthus mucronatus Schechzeria palustris Sphagnum spp. Vaccinium macrocarpon Vaccinium corymbosum Vaccinium oxycoccos Woodwardia virginica Xyris difformis	Oak Opening species  Carex Carvytolepis  Carex lasiocarpa  Carex stricta  Cladium mariscoides  Calamagrostis stricta  Calamagrostis canaden:  Quercus palustris	Calamagrostis Calamogrostis stricta Carex atherodes Carex buxbaumii Carex pellita

ORAM	v. 5.0 Field	l Form Quantitative	Rating						
Site	: Laurel L	ake	Rater(s):	Emily Nagle,	Lindsey Ja	kovljevi	С	<b>Date:</b> 8/23/23	2
3	3			Wetland	d: W-M				
subtotal	max6pts	Metric 1. Wetla Select one size class and		size).				39	1
	3	3 3 to 10 <acres 0.3="" <3="" acres<="" td="" to=""><td>s (10.1 to &lt;20.2ha s (4 to &lt;10.1ha) (- (1.2 to &lt;4ha) (3 pt s (0.12 to &lt;1.2ha) res (0.04 to &lt;0.12ha)</td><td>4 pts) s) (2 pts)</td><td></td><td></td><td></td><td>Final Score</td><td>Category</td></acres>	s (10.1 to <20.2ha s (4 to <10.1ha) (- (1.2 to <4ha) (3 pt s (0.12 to <1.2ha) res (0.04 to <0.12ha)	4 pts) s) (2 pts)				Final Score	Category
11	8	Metric 2. Upla			_				
subtotal	max14pts	4 MEDIUM. Buf NARROW. Bu VERY NARRO 2b. Intensity of surround	s average 50m (16 fers average 25m uffers average 10r DW. Buffers avera ding land use. S	4 ft) or more around v to <50m (82 to <164 f n to <25m (32 ft to <82 ge <10m (<32ft) aroun	vetland perimter t) around wetland 2 ft) around wetland nd wetland perim check and ave	(7) d perimeter of the perimeter (0) erage.	(4)		
	4	5 LOW. Old field MODERATEL	d (>10 years), shr Y HIGH. Residen	ubland, young second ial, fenced pasture, pa asture, row cropping,	growth forest. (5 ark, conservation	i) tillage, new	fallow field. (3)		
23	12	Metric 3. Hydr			O.	,			
subtotal	max30pts	3a. Sources of water. S  High pH ground  Other groundw	dwater (5)	ly.		3b. Conne	ectivity. Score all t 100 year floodplair Between stream/la		se (1)
	1	Perennial surfa 3c. Maximum water dep >0.7 (27.6in) (: 04. to 0.7m (15.7ir) 1 >0.4m (<15.7ir) 3e. Modifications to natu	mittent surface wa ace water (lake or th. Select only of 3) 5.7 to 27.6in) (2) n) (1) ural hydrologic re	stream) (5) one and assign scor	2	2	Part of riparian or or ion inundation/satu Semi-to permanen Regularly inundate Seasonally inunda Seasonally saturat	ration. Score one or tly inundated/saturated ed/saturated (3)	dbl check.
	7	None or none 7 Recovered (7) Recovering (3) Recent or no r	)	Che	ck all disturban  ditch  tile  dike  weir  stormwater i				
37	14	Metric 4. Habitat		•					
subtotal	max20pts	4a. Substrate disturband None or none Recovered (3) Recovering (2) Recent or no r 4b. Habitat developmen Excellent (7)	apparent (4) ) ecovery (1)		6		None or none appa Recovered (6) Recovering (3) Recent or no recovered		nd average.
	4	Very good (6) Good (5)  4 Moderately go Fair (3) Poor to fair (2) Poor (1)		Che	ck all disturban mowing grazing clearcutting selective cut woody debris toxic pollutar	tting s removal	shrub/sag herbaced sediment dredging farming	bling removal nus/aquatic bed remova ation	1
Su	37 obtotal this page								<u></u>

Site: L	aurel La	ke	Rater(s):	Emily Nagle, Li	ndsey J	Jakovljevic	Date:	8/23/22
				Wetland:	W-M			
	37				!			
Subto	tal1st page							
Subio	tarrst page							
37	0	Metric 5. Special	Wotlands					
	ax10pts	Check all that apply and		ed				
		Bog (10)	oo.o ao maioan					
		Fen (10)						
		Old growth fore	est (10)					
		Mature foreste	d wetland (5)					
	0	Lake Erie Coas	stal/tributary wetla	nd-unrestricted hydrolog	<i>(</i> (10)			
				nd-restricted hydrology (	5)			
			d Prairies (Oak O	penings) (10)				
		Relict Wet Prai				4.00		
				threatened or endangere		10)		
				ater fowl habitat or usage ion 1 Qualitative Rating -				
	ļ	Category I We	tiariu. See questi	on i Qualitative Rating -	10			
20	2	Matria C. Dlant as			.!			
39	2	Metric 6. Plant co		interspersion, n		•		
btotal ma	x20pts	6a. Wetland Vegetation				on Community Cover So		
	ĺ	Score all present using 0	to 3 scale.		0	Absent or comprises <0		
		Aquatic bed 1 Emergent				Preset and either comm vegetation and is of m		
	2	0 Shrub			1	significant part but is of		omprises a
<u> </u>		1 Forest				Present and either com		rt of wetland's
		Mudflats				vegetation and is of m		
		Open water			2	part and is of hgh qual		,
		Other				Present and comprises	•	ore of wetland's
	!	6b. Horizontal (plan view	) interspersion.		3	vegetation and is of hi		
		Select only one.			Narrative	Description of Vegetat	ion Quality	
		High (5)				Low spp diversity and/o	or predominance of r	onnative or
		Moderately hig	h (4)		low	disturbance tolerant na	ative species	
L	1	Moderate (3)				Native spp are dominar	nt component of the	vegetation,
		Moderately low	(2)			although nonnative an		
		1 Low (1)				can also be present, a		
		None (o)	54			moderately high, but g		ce of rare,
		6c. Coverage of invasive			mod	threatened or endange		-40
	j	long form for list. Ac		ins for coverage.		A predominance of nation		
		-3 Extensive >759				and/or disturbance tole absent, and high spp of		
<u> </u>	-3	-3 Moderate 25-79 Sparse 5-25%			high	the presence of rare, t		
<u> </u>		Nearly absent				and Open Water Class (		yP
		Absent (1)			0	Absent	•	
	ļ	6d. Microtopoghraphy			1	Low 0.1 to 1ha (0.247 to	o 2.47 acres)	

39.0 GRAND TOTAL (max 100 pts)

Vegetated hummocks/tussocks

Coarse woody debris > 15cm (6in) Standing dead >25cm (10in) dbh Amphibian breeding pools

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html last revised 1 February 2001 jjm

Comments:

End of Quantitative Rating. Complete Categorization Worksheets.

High 4ha (9.88 acres) or more

amounts of highest quality

Present very small amounts or if more common of marginal quality

Present in moderate amounts, but not of highest quality or in small

Present in moderate or greater amounts and of highest quality

Microtopography Cover Scale

# **ORAM Summary Worksheet**

		YES	NO	Result
Narrative Rating	Question 1 Critical Habitat		<b>V</b>	If yes, Category 3.
	Question 2. Threatened or Endangered Species		<b>V</b>	If yes, Category 3.
	Question 3. High Quality Natural Wetland		<b>V</b>	If yes, Category 3.
	Question 4. Significant bird habitat		<b>✓</b>	If yes, Category 3.
	Question 5. Category 1 Wetlands		<b>✓</b>	If yes, Category 1.
	Question 6. Bogs		<b>✓</b>	If yes, Category 3.
	Question 7. Fens		<b>V</b>	If yes, Category 3.
	Question 8a. Old Growth Forest		<b>V</b>	If yes, Category 3.
	Question 8b. Mature Forested Wetland		7	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted		7	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with		<b>V</b>	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants		7	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings		<b>V</b>	If yes, Category 3
	Question 11. Relict Wet Prairies		7	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	3		
	Metric 2. Buffers and surrounding land use	8		
	Metric 3. Hydrology	12		
	Metric 4. Habitat	14		
	Metric 5. Special Wetland Communities			
	Metric 6. Plant communities, interspersion, microtopography	2		
	TOTAL SCORE	39		Category based on score breakpoints

**Complete Wetland Categorization Worksheet.** 

# **Wetland Categorization Worksheet**

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

Final Category
CAT MOD 2

**End of Ohio Rapid Assessment Method for Wetlands.** 

## **Background Information**

	<u> </u>	
Name:	Emily Nagle	
Date:	8/23/2022	
Affiliation:	CT Consultants	
Address:	8150 Sterling Court, Mentor Ohio	
Phone Number:	440-417-6698	
e-mail address:	enagle@ctconsultants.com	
Name of Wetland:	W-N	
Vegetation Communit(ies):	Emergent	
HGM Class(es):	Depressional	
Lat/Long or UTM Coordin	nate	41.244523° -81.47800°
USGS Quad Name		Hudson
County		Summit
City/Township		Hudson
Section and Subsection		T4N R10W
Hydrologic Unit Code		041100020401
Site Visit		8/16/2022
National Wetland Inventor	гу Мар	N/A
Ohio Wetland Inventory M		
	1ap	N/A
Soil Survey Delineation report/map	1ap	N/A BhB & CcB See Attached

Name of Wetland:	W-N
Wetland Size (acres, hectares):	0.25
Sketch: Include north arrow, relationship with other s	urface waters, vegetation zones, etc.
See Attached.	
Comments, Narrative Discussion, Justification of Categor	y Changes:
Final score : 37	Category: CAT MOD 2

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries.

use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	<b>V</b>	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	<b>V</b>	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	V	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	V	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	V	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	V	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

#### **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on Information obtained from the site visit or the literature and by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means

the wetland is listed in the appropriate State of Ohio database.

#	Question	YES	NO	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species?  Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Wetland should be evaluated for possible Category 3 status. Go to Question 2	Go to Question 2	<b>▽</b>
2	<b>Threatened or Endangered Species.</b> Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	Wetland is a Category 3 wetland. Go to Question 3	Go to Question 3	<b>√</b>
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	Wetland is a Category 3 wetland. Go to Question 4	Go to Question 4	<b>√</b>
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland. Go to Question 5	Go to Question 5	<b>V</b>
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Wetland is a Category 3 wetland. Go to Question 6	Go to Question 6	<b>✓</b>
6	<b>Bogs.</b> Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Wetland is a Category 3 wetland. Go to Question 7	Go to Question 7	7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	Wetland is a Category 3 wetland. Go to Question 8	Go to Question 8a	✓
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or o evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Wetland is a Category 3 wetland. Go to Question 8b	Go to Question 8b	<b>✓</b>

8b	cover of upper for	wetlands. Is the wetland a forested est canopy consisting of deciduous t n), generally diameters greater than 4	trees with large diameters at	Wetland should be evaluated for possible Category 3 status Go to Question 9a	Go to Question 9a
9a	less than 575 feet	Il and tributary wetlands. Is the word on the USGS map, adjacent to this accessible to fish?		Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?		Wetland should be evaluated for possible Category 3 status Go to Question 9d	Go to Question 9c	
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.		Go to Question 9d	Go to Question 9d	
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?		Wetland is a Category 3 wetland. Go to Question 10	Go to Question 9e	
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?		Wetland should be evaluated for possible Category 3 status. Go to Question 10	Go to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.			Wetland is a Category 3 wetland. Go to Question 11	Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).		Wetland should be evaluated for possible Category 3 status. Complete Quantitative Rating.	Complete Quantitative Rating.	
	. Characteristic pl	•			<del></del>
Lythrum Myrioph Najas mi Phalaris Phragmi Potamog Ranuncu Rhamnus	arundinacea tes australis eton crispus lus ficaria s frangula agustifolia	fen species  Zyzadenus elegans var. glaucus Cacalia plantaginea Carex flava Carex stricia Deschampsia caespitosa Eleocharis rostellata Eriophorum viridicarinatum Gentianopsis spp. Lobelia kalmii Parnassia glauca Potentilla fruticosa Rhamnus alnifolia Rhynchospora capillacea Salix candida Salix myricoides Salix serissima Solidago ohioensis Tofieldia glutinosa Triglochin maritimum	bog species  Calla palustris Carex atlantica var. capillacea Carex echinata Carex oligosperma Carex trisperma Chamaedaphne calyculata Decodon verticillatus Eriophorum virginicum Larix laricina Nemopanthus mucronatus Schechzeria palustris Sphagnum spp. Vaccinium macrocarpon Vaccinium corymbosum Vaccinium ocyymbosum	Oak Opening species  Carex cryptolepis  Carex lasiocarpa  Carex stricta  Cladium mariscoides  Calamagrostis stricta  Calamagrostis canaden:  Quercus palustris	Calamagrostis Calamogrostis stricta Carex atherodes Carex buxbaumii Carex pellita

		Form Quantitative Rating					
Site	: Laurel L	ake Rater(s): Emily Nagle, Lindsey Jakovljevic	<b>Date:</b> 8/26/2	2			
1	1	Wetland: W-N					
subtotal	max6pts	Metric 1. Wetland Area (size). Select one size class and assign score.	37	MOD 2			
	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	Final Score	Category			
10	9	Metric 2. Upland buffers and surrounding land use.					
subtotal	max14pts	Zal Calculate average buffer width. Select only one and assign score. Do not double check.  WIDE. Buffers average 50m (164 ft) or more around wetland perimter (7)  MEDIUM. Buffers average 25m to <50m (82 to <164 ft) around wetland perimter (4)  NARROW. Buffers average 10m to <25m (32 ft to <82 ft) around wetland perimter (1)  VERY NARROW. Buffers average <10m (<32ft) around wetland perimter (0)  2b. Intensity of surrounding land use. Select one or double check and average.					
	5	7 VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7) LOW. Old field (>10 years), shrubland, young second growth forest. (5) 3 MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3) HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)					
23	13	Metric 3. Hydrology.					
subtotal	max30pts	Other groundwater (3)  Precipitation (1)  Seasonal/Intermittent surface water (3)  Perennial surface water (lake or stream) (5)  3c. Maximum water depth. Select only one and assign score.  >0.7 (27.6in) (3)  Between  Part of vig  3d. Duration inunda  3c. Maximum water depth. Select only one and assign score.  Semi-to p  3 Regularly	floodplain (1) stream/lake and other human usetland/upland (e.g. forest), comportion or upland corridor (1) tion/saturation. Score one obermanently inundated/saturated (3)	olex (1)			
	7	1 >0.4m (<15.7in) (1) Seasonal 3e. Modifications to natural hydrologic regime. Score one or double check and average.  None or none apparent (12) Recovered (7) Recovering (3) Recent or no recovery (1)  Check all disturbances observed  ditch  dike  dike	lly inundated (2)  lly saturated in upper 30 cm (1)  point source (non stormwater) filling/grading dirt road dredging other - culvert				
36	13	Metric 4. Habitat alteration and development.					
subtotal	max20pts	None or none apparent (4)	` '	nd average.			
	3	Moderately good (4)         grazing           3         Fair (3)         clearcutting           Poor to fair (2)         selective cutting           Poor (1)         ✓ woody debris removal	shrub/sapling removal herbaceous/aquatic bed remova sedimentation dredging farming nutrient enrichment	al			
	36						

Subtotal this page
last revised 1 February 2001 jjm

RAM v. 5.0 Fi	ld Form Quantitative Rating				
Site: Laure	Lake Rater(s):	Emily Nagle, Lir	ndsey .	Jakovljevic <b>D</b>	ate: 8/26/22
•		Wetland:		<u>,                                      </u>	, <u>'</u>
26	۱ '				
36	_				
Subtotal1st p	ge				
	٦				
36 0	Metric 5. Special Wetlands				
btotal max10pts	Check all that apply and score as indicate	ed.			
	Bog (10)				
	Fen (10)				
	Old growth forest (10)				
	Mature forested wetland (5)				
0	Lake Erie Coastal/tributary wetlar	nd-unrestricted hydrology	(10)		
	Lake Erie Coastal/tributary wetlar	nd-restricted hydrology (5	)		
	Lake Plain Sand Prairies (Oak O	penings) (10)			
	Relict Wet Prairies (10)				
	Known occurrence state/federal t	-		10)	
	Significant migratory songbird/wa	•			
	Category 1 Wetland. See question	on 1 Qualitative Rating - 1	10		
	٦				
37 1	Metric 6. Plant communities,	interspersion, m	icroto	pography.	
total max20pts	6a. Wetland Vegetation Communities		Vegetation	on Community Cover Scale	
	Score all present using 0 to 3 scale.	•	0	Absent or comprises <0.1ha (0.247	l acres) contiguous area
	Aquatic bed			Preset and either commprises small	part of wetland's
	1 Emergent			vegetation and is of moderate qual	ity, or comprises a
2	0 Shrub		1	significant part but is of low quality.	
	1 Forest			Present and either comprises signifi	
	Mudflats			vegetation and is of moderate qual	ity or comprises a small
	Open water		2	part and is of hgh quality.	
	Other			Present and comprises significant p	art or more of wetland's
	6b. Horizontal (plan view) interspersion.	·	3 Norrotive	vegetation and is of high quality.	
	Select only one.		Narrauve	Description of Vegetation Quality	
	High (5)		la	Low spp diversity and/or predomina	
2	Moderately high (4)	•	low	disturbance tolerant native species	
	Moderate (3)  2 Moderately low (2)			Native spp are dominant componen	
				although nonnative and/or distruba	
	Low (1) None (o)			can also be present, and species of moderately high, but generally w/o	•
	. ,	o Table 1 OPAM	mod	threatened or endangered spp.	presence or rare,
	<ol> <li>Coverage of invasive plants. Refer to long form for list. Add or deduct poir</li> </ol>		mod	A predominance of native species, v	with nonative son
	-5 Extensive >75% cover (-5)	no for coverage.		and/or disturbance tolerant native	
	Moderate 25-75% cover (-3)			absent, and high spp diversity and	
-5	Sparse 5-25% cover (-1)		high	the presence of rare, threatened or	
	Nearly absent <5% cover (0)	•		and Open Water Class Quality	
	Absent (1)	•	0	Absent	
	6d Microtopogbraphy		1	Low 0.1 to 1bo (0.247 to 2.47 perce	

## 37.0 GRAND TOTAL (max 100 pts)

Score all present using 1 to 3 scale.

Vegetated hummocks/tussocks

Coarse woody debris > 15cm (6in) Standing dead >25cm (10in) dbh Amphibian breeding pools

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html last revised 1 February 2001 jjm

Comments:

End of Quantitative Rating. Complete Categorization Worksheets.

Moderate 1 to <4ha (2.47 to 9.88 acres)

Present very small amounts or if more common of marginal quality

Present in moderate amounts, but not of highest quality or in small

Present in moderate or greater amounts and of highest quality

High 4ha (9.88 acres) or more

amounts of highest quality

Microtopography Cover Scale

# **ORAM Summary Worksheet**

		YES	NO	Result
Narrative Rating	Question 1 Critical Habitat		<b>V</b>	If yes, Category 3.
	Question 2. Threatened or Endangered Species		<b>V</b>	If yes, Category 3.
	Question 3. High Quality Natural Wetland		<b>V</b>	If yes, Category 3.
	Question 4. Significant bird habitat		<b>✓</b>	If yes, Category 3.
	Question 5. Category 1 Wetlands		<b>✓</b>	If yes, Category 1.
	Question 6. Bogs		<b>✓</b>	If yes, Category 3.
	Question 7. Fens		<b>V</b>	If yes, Category 3.
	Question 8a. Old Growth Forest		<b>V</b>	If yes, Category 3.
	Question 8b. Mature Forested Wetland		<b>7</b>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted		7	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with		<b>√</b>	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants		7	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings		<b>V</b>	If yes, Category 3
	Question 11. Relict Wet Prairies		7	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	1		
	Metric 2. Buffers and surrounding land use	9		
	Metric 3. Hydrology	13		
	Metric 4. Habitat			
	Metric 5. Special Wetland Communities			
	Metric 6. Plant communities, interspersion, microtopography	1		
	TOTAL SCORE	37		Category based on score breakpoints

**Complete Wetland Categorization Worksheet.** 

# **Wetland Categorization Worksheet**

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

Final Category
CAT MOD 2

**End of Ohio Rapid Assessment Method for Wetlands.** 

## **Background Information**

Name:	Emily Nagle					
Date:	8/23/2022					
Affiliation:	CT Consultants	CT Consultants				
Address:	8150 Sterling Court, Mentor Ohio					
Phone Number:	440-417-6698					
e-mail address:	enagle@ctconsultants.com					
Name of Wetland:	W-O& W-P					
Vegetation Communit(ies):	Forested					
HGM Class(es):	Depressional					
Lat/Long or UTM Coordin	ate	41.243340°				
USGS Quad Name		81.474896° Hudson				
County		Summit				
City/Township		Hudson				
Section and Subsection T4N R10W						
Hydrologic Unit Code	041100020401					
Site Visit	8/16/2022					
National Wetland Inventory Map						
Ohio Wetland Inventory N	Iap					
Soil Survey		BhB & CcB				
Delineation report/map	See Attached					

Name of Wetland:	W-O & W-P
Wetland Size (acres, hectares):	0.08
Sketch: Include north arrow, relationship with other su	rface waters, vegetation zones, etc.
See Attached.	
Comments, Narrative Discussion, Justification of Category	Changes
Comments, Narrative Discussion, Justification of Category	Changes.
Final score : 37	Category: Modified CAT 2

### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries.

use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	<b>V</b>	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	<b>V</b>	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	V	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	V	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	V	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	V	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

### **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on Information obtained from the site visit or the literature and by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means

the wetland is listed in the appropriate State of Ohio database.

#	Question	YES	NO	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species?  Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Wetland should be evaluated for possible Category 3 status. Go to Question 2	Go to Question 2	<b>▽</b>
2	<b>Threatened or Endangered Species.</b> Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	Wetland is a Category 3 wetland. Go to Question 3	Go to Question 3	<b>√</b>
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	Wetland is a Category 3 wetland. Go to Question 4	Go to Question 4	<b>√</b>
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland. Go to Question 5	Go to Question 5	<b>V</b>
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Wetland is a Category 3 wetland. Go to Question 6	Go to Question 6	<b>✓</b>
6	<b>Bogs.</b> Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Wetland is a Category 3 wetland. Go to Question 7	Go to Question 7	7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	Wetland is a Category 3 wetland. Go to Question 8	Go to Question 8a	✓
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or o evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Wetland is a Category 3 wetland. Go to Question 8b	Go to Question 8b	<b>✓</b>

8b	breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?			Wetland should be evaluated for possible Category 3 status Go to Question 9a	Go to Question 9a
9a		I and tributary wetlands. Is the woon the USGS map, adjacent to this accessible to fish?		Go to Question 9b	Go to Question 10
9b	the loss of aquation	, ,		Wetland should be evaluated for possible Category 3 status Go to Question 9d	Go to Question 9c
9c	i.e. the wetland is alterations), or the and river influence	er levels the wetland's primary hydro hydrologically unrestricted (no lakew wetland can be characterized as an ed hydrology. These include sandbar buth wetlands, or those dominated by	ard or upland border  "estuarine" wetland with lake deposition wetlands, estuarine	Go to Question 9d	Go to Question 9d
9d		have a predominance of native spec ough non-native or disturbance tolera	o o	Wetland is a Category 3 wetland. Go to Question 10	Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?			Wetland should be evaluated for possible Category 3 status. Go to Question 10	Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.			Wetland is a Category 3 wetland. Go to Question 11	Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).		Wetland should be evaluated for possible Category 3 status. Complete Quantitative Rating.	Complete Quantitative Rating.	
	. Characteristic pl	•	<del> </del>		<del> </del>
Lythrum Myrioph Najas mi Phalaris Phragmi Potamog Ranuncu Rhamnus	arundinacea tes australis eton crispus lus ficaria s frangula agustifolia	fen species  Zvzadenus elezans var. glaucus Cacalia plantaginea Carex flava Carex sterilis Carex stricta Deschampsia caespitosa Eleocharis rostellata Eriophorum viridicarinatum Gentianopsis spn. Lobelia kalmii Parnassia glauca Potentilla fruticosa Rhamnus alnifolia Rhynchospora capillacea Salix candida Salix nerissima Solidago ohioensis Tofieldia glutinosa Triglochin maritimum	bog species  Calla palustris Carex atlantica var. capillacea Carex oligosperma Carex trisperma Chamaedaphne calyculata Decodon verticillatus Eriophorum virginicum Larix laricina Nemopanthus mucronatus Schechzeria palustris Sphagnum spp. Vaccinium macrocarpon Vaccinium corymbosum Vaccinium oxycoccos Woodwardia virginica Xyris difformis	Oak Opening species  Carex Carvytolepis  Carex lasiocarpa  Carex stricta  Cladium mariscoides  Calamagrostis stricta  Calamagrostis canaden:  Quercus palustris	Calamagrostis Calamogrostis stricta Carex atherodes Carex buxbaumii Carex pellita

	_	Form Quantitative Rating		
Site	Laurel La	akes Rater(s): Emily Nagle, Lindsey Jakovjevic	<b>Date:</b> 8/23/2	2
0	0	Wetland: W-O& W-P		
subtotal	max6pts	Metric 1. Wetland Area (size). Select one size class and assign score.	37	Mod 2
	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 (0="" (0.04="" (0.04ha)="" (0.12="" (1="" (1.2="" (2="" (3="" 0.1="" 0.3="" <0.1="" <0.12ha)="" <0.3="" <1.2ha)="" <3="" <4ha)="" acres="" pt)="" pts)="" pts)<="" td="" to=""><td>Final Score</td><td>Category</td></acres>	Final Score	Category
6	6	Metric 2. Upland buffers and surrounding land use.		
subtotal	max14pts	Calculate average buffer width. Select only one and assign score. Do not double check.  WIDE. Buffers average 50m (164 ft) or more around wetland perimter (7)  MEDIUM. Buffers average 25m to <50m (82 to <164 ft) around wetland perimeter (4)  NARROW. Buffers average 10m to <25m (32 ft to <82 ft) around wetland perimter (1)  VERY NARROW. Buffers average <10m (<32ft) around wetland perimter (0)  2b. Intensity of surrounding land use. Select one or double check and average.		
	5	7 VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7) LOW. Old field (>10 years), shrubland, young second growth forest. (5)  3 MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3) HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)		
19	13	Metric 3. Hydrology.		
subtotal	1 1	1 Precipitation (1) 1 1 Part of wetland/upla Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5) 3d. Duration inundation/satur	(1)  ke and other human us and (e.g. forest), comp pland corridor (1) ration. Score one o ly inundated/saturated d/saturated (3)	lex (1)
	7	1 >0.4m (<15.7in) (1) Seasonally saturate  3e. Modifications to natural hydrologic regime. Score one or double check and average.  None or none apparent (12)  Recovered (7) Check all disturbances observed	ed in upper 30 cm (1) ce (non stormwater) ling	
32	13	Metric 4. Habitat alteration and development.		<del></del>
subtotal	max20pts	4a. Substrate disturbance. Score one or dbl check and average.  None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1)  4b. Habitat development. Select only one and assign score.  4c. Habitat alteration. Score Recovered (6) Recovered (6) Recovering (3) Recent or no recovery (1)  Excellent (7)	rent (9)	nd average.
	32			ıl

#### ORAM v. 5.0 Field Form Quantitative Rating Date: 8/23/22 Site: Laurel Lakes Rater(s): Emily Nagle, Lindsey Jakovjevic Wetland: W-O& W-P 32 Subtotal1st page 0 32 Metric 5. Special Wetlands Check all that apply and score as indicated. max10pts Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) 0 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 37 5 Metric 6. Plant communities, interspersion, microtopography. 6a. Wetland Vegetation Communities Vegetation Community Cover Scale cubtotal max20pts Score all present using 0 to 3 scale. Absent or comprises <0.1ha (0.2471 acres) contiguous area Aquatic bed Preset and either commprises small part of wetland's Emergent vegetation and is of moderate quality, or comprises a 2 0 Shrub significant part but is of low quality. Present and either comprises significant part of wetland's Mudflats vegetation and is of moderate quality or comprises a small Open water part and is of hgh quality. Present and comprises significant part or more of wetland's Other 6b. Horizontal (plan view) interspersion. vegetation and is of high quality Select only one. Narrative Description of Vegetation Quality High (5) Low spp diversity and/or predominance of nonnative or Moderately high (4) low disturbance tolerant native species 2 Moderate (3) Native spp are dominant component of the vegetation. Moderately low (2) although nonnative and/or distrubance tolerant native spp Low (1) can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare, 6c. Coverage of invasive plants. Refer to Table 1 ORAM mod threatened or endangered spp. long form for list. Add or deduct points for coverage. A predominance of native species, with nonative spp Extensive >75% cover (-5) and/or disturbance tolerant native spp appsent or virtually Moderate 25-75% cover (-3) absent, and high spp diversity and often, but not always, Sparse 5-25% cover (-1) -1 the presence of rare, threatened or endangered spp Nearly absent <5% cover (0) Mudflat and Open Water Class Quality Absent (1) 0 6d. Microtopoghraphy

## 37.0 GRAND TOTAL (max 100 pts)

Score all present using 1 to 3 scale.

Vegetated hummocks/tussocks

Coarse woody debris > 15cm (6in)

Standing dead >25cm (10in) dbh Amphibian breeding pools

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html last revised 1 February 2001 jjm

Comments:

2

End of Quantitative Rating. Complete Categorization Worksheets.

Low 0.1 to 1ha (0.247 to 2.47 acres)

amounts of highest quality

Microtopography Cover Scale

1

Moderate 1 to <4ha (2.47 to 9.88 acres) High 4ha (9.88 acres) or more

Present very small amounts or if more common of marginal quality Present in moderate amounts, but not of highest quality or in small

Present in moderate or greater amounts and of highest quality

# **ORAM Summary Worksheet**

		YES	NO	Result
Narrative Rating	Question 1 Critical Habitat		<b>V</b>	If yes, Category 3.
	Question 2. Threatened or Endangered Species		<b>V</b>	If yes, Category 3.
	Question 3. High Quality Natural Wetland		<b>V</b>	If yes, Category 3.
	Question 4. Significant bird habitat		<b>✓</b>	If yes, Category 3.
	Question 5. Category 1 Wetlands		<b>✓</b>	If yes, Category 1.
	Question 6. Bogs		<b>✓</b>	If yes, Category 3.
	Question 7. Fens		<b>V</b>	If yes, Category 3.
	Question 8a. Old Growth Forest		<b>V</b>	If yes, Category 3.
	Question 8b. Mature Forested Wetland		<b>7</b>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted		7	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with		<b>√</b>	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants		7	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings		<b>V</b>	If yes, Category 3
	Question 11. Relict Wet Prairies		7	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0		
	Metric 2. Buffers and surrounding land use	6		
	Metric 3. Hydrology	13		
	Metric 4. Habitat			
	Metric 5. Special Wetland Communities			
	Metric 6. Plant communities, interspersion, microtopography	5		
	TOTAL SCORE	37		Category based on score breakpoints

**Complete Wetland Categorization Worksheet.** 

# **Wetland Categorization Worksheet**

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

Final Category

Modified CAT 2

**End of Ohio Rapid Assessment Method for Wetlands.** 

### **Background Information**

Name:	Emily Nagle					
Date:	8/23/2022					
Affiliation:	CT Consultants					
Address:	8150 Sterling Court, Mentor Ohio					
Phone Number:	440-417-6698					
e-mail address:	enagle@ctconsultants.com					
Name of Wetland:	W-Q and W-R					
Vegetation Communit(ies):	Emergent					
HGM Class(es):	Depressional lude map, address, north arrow, landmarks, d					
Lat/Long or UTM Coordin	ate	41.242912°				
USGS Quad Name		-81.474768° Hudson				
County		Summit				
City/Township		Hudson				
Section and Subsection T4N R10W						
Hydrologic Unit Code 041100020401						
Site Visit 6/22/2022						
National Wetland Inventory Map PSS1/EM1C						
Ohio Wetland Inventory Map PSS1/EM1C						
Soil Survey CcB						
Delineation report/map See Attached						

Name of Wetland:	W-Q and W-R
Wetland Size (acres, hectares):	0.2
Sketch: Include north arrow, relationship with other	ner surface waters, vegetation zones, etc.
Sketch: Include north arrow, relationship with other See Attached.	ner surface waters, vegetation zones, etc.
Comments, Narrative Discussion, Justification of Ca	tegory Changes:
Final score : 39.5	Category: CAT MOD 2

### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries.

use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	<b>V</b>	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	<b>V</b>	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	V	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	V	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	V	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	V	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

### **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on Information obtained from the site visit or the literature and by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means

the wetland is listed in the appropriate State of Ohio database.

#	Question	YES	NO	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species?  Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Wetland should be evaluated for possible Category 3 status. Go to Question 2	Go to Question 2	<b>▽</b>
2	<b>Threatened or Endangered Species.</b> Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	Wetland is a Category 3 wetland. Go to Question 3	Go to Question 3	<b>√</b>
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	Wetland is a Category 3 wetland. Go to Question 4	Go to Question 4	<b>√</b>
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland. Go to Question 5	Go to Question 5	<b>V</b>
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Wetland is a Category 3 wetland. Go to Question 6	Go to Question 6	<b>✓</b>
6	<b>Bogs.</b> Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Wetland is a Category 3 wetland. Go to Question 7	Go to Question 7	7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	Wetland is a Category 3 wetland. Go to Question 8	Go to Question 8a	✓
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or o evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Wetland is a Category 3 wetland. Go to Question 8b	Go to Question 8b	<b>✓</b>

8b	cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?  G		Wetland should be evaluated for possible Category 3 status Go to Question 9a	Go to Question 9a	
9a		I and tributary wetlands. Is the woon the USGS map, adjacent to this accessible to fish?		Go to Question 9b	Go to Question 10
9b	the loss of aquation	s hydrology result from measures de plants, i.e. the wetland is partially hy ard or landward dikes or other hydrol	ydrologically restricted from Lake	Wetland should be evaluated for possible Category 3 status Go to Question 9d	Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.			Go to Question 9d	Go to Question 9d
9d	present?			Wetland is a Category 3 wetland. Go to Question 10	Go to Question 9e
9e				Wetland should be evaluated for possible Category 3 status. Go to Question 10	Go to Question 10
10	Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a			Wetland is a Category 3 wetland. Go to Question 11	Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by som or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Weetc.).		e formerly located in the Darby s (Wyandot, Crawford, and ucas, Wood Counties), and	Wetland should be evaluated for possible Category 3 status. Complete Quantitative Rating.	Complete Quantitative Rating.
	. Characteristic pl	•	<del> </del>		<del> </del>
Lythrum Myrioph Najas mi Phalaris Phragmi Potamog Ranuncu Rhamnus	arundinacea tes australis eton crispus lus ficaria s frangula agustifolia	fen species  Zvzadenus elezans var. glaucus Cacalia plantaginea Carex flava Carex sterilis Carex stricta Deschampsia caespitosa Eleocharis rostellata Eriophorum viridicarinatum Gentianopsis spn. Lobelia kalmii Parnassia glauca Potentilla fruticosa Rhamnus alnifolia Rhynchospora capillacea Salix candida Salix nerissima Solidago ohioensis Tofieldia glutinosa Triglochin maritimum	bog species  Calla palustris Carex atlantica var. capillacea Carex oligosperma Carex trisperma Chamaedaphne calyculata Decodon verticillatus Eriophorum virginicum Larix laricina Nemopanthus mucronatus Schechzeria palustris Sphagnum spp. Vaccinium macrocarpon Vaccinium corymbosum Vaccinium oxycoccos Woodwardia virginica Xyris difformis	Oak Opening species  Carex Carvytolepis  Carex lasiocarpa  Carex stricta  Cladium mariscoides  Calamagrostis stricta  Calamagrostis canaden:  Quercus palustris	Calamagrostis Calamogrostis stricta Carex atherodes Carex buxbaumii Carex pellita

Site		<b>l Form Quantitative</b> ake		Emily Nagle,	Lindsey Ja	akovljev	/ic		Date: 8/23/2	2
1	1			Wetlan	d: W-Q a	ınd W-l	<del></del>	1	•	
subtotal	max6pts	Metric 1. Wetl Select one size class an							39.5	Mod 2
	1	10 to <25 acre 3 to 10 <acres 0.3 to &lt;3 acre</acres 	es (10.1 to <20.2ha es (4 to <10.1ha) (- (1.2 to <4ha) (3 pt s (0.12 to <1.2ha) res (0.04 to <0.12ha)	4 pts) (s) (2 pts)					Final Score	Category
7	6	Metric 2. Upla	nd buffers	and surrou	nding la	nd use				
subtotal	max14pts	MEDIUM. Bu  1 NARROW. B  VERY NARRO  2b. Intensity of surroun	s average 50m (16 ifers average 25m uffers average 10r DW. Buffers avera ding land use. S	34 ft) or more around v to <50m (82 to <164 to n to <25m (32 ft to <83 age <10m (<32ft) arou belect one or double	wetland perimter it) around wetlar 2 ft) around wetl and wetland perin check and av	r (7) nd perimete land perimte mter (0) rerage.	r (4)			
	5	LOW. Old fiel  3 MODERATEL	d (>10 years), shr Y HIGH. Resident	er forest, prairie, savar ubland, young second tial, fenced pasture, pa asture, row cropping,	growth forest. ( ark, conservatio	(5) n tillage, ne	w fallow field	l. (3)		
23	16	Metric 3. Hydr	ology.							
subtotal	6 1	5 Perennial surf 3c. Maximum water dep >0.7 (27.6in) (	ndwater (5) vater (3) 1) rmittent surface water (lake or oth. Select only of 3) 5.7 to 27.6in) (2) n) (1) ural hydrologic research	ater (3) stream) (5) one and assign scor	4	1 1 3d. Dura 4	Between Part of w Part of rip ation inunda Semi-to p Regularly Seasonal	floodplain stream/la etland/upl parian or u tion/satu permanent i inundate lly inundate	h (1) ke and other human usand (e.g. forest), compupland corridor (1) ration. Score one o tly inundated/saturated	olex (1)
	3	Recovered (7 3 Recovering (3 Recent or no	)	Che	tile dike weir			point sour filling/grad dirt road dredging other - cu		
33.5	10.5	Metric 4. Habitat	alteration ar	nd developmer	nt.					
subtotal	max20pts	4a. Substrate disturbandon None or none 3 Recovered (3) Recovering (2) Recent or not 4b. Habitat developmen Excellent (7)	apparent (4) ) recovery (1)		4.5	4c. Habi 6 3	None or r Recovere Recoveri	none appa ed (6)		nd average.
	3	Very good (6) Good (5) Moderately go 3 Fair (3) Poor to fair (2) Poor (1)	,	Che	grazing clearcutting selective cu	3 utting ris removal		herbaceo sedimenta dredging farming	bling removal us/aquatic bed remova ation nrichment	al

Subtotal this page

#### ORAM v. 5.0 Field Form Quantitative Rating Site: Laurel Lake Date: 8/23/22 Rater(s): Emily Nagle, Lindsey Jakovljevic

Wetland: W-Q and W-R

22.5

	<b>33.</b> 3						
Su	ıbtotal1st page						
33.5	0	Metric 5. Special Wetlands					
subtotal	max10pts	Check all that apply and score as indicated.					
		Bog (10)					
		Fen (10)					
		Old growth forest (10)					
		Mature forested wetland (5)					
	0	Lake Erie Coastal/tributary wetland-unrestricted hydrol	ogy (10)				
	<del></del>	Lake Erie Coastal/tributary wetland-restricted hydrolog	y (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 usa		` '			
		Category 1 Wetland. See question 1 Qualitative Ratin					
20.5	6	Matria C. Diant communities interespecies	!				
39.5	6	Metric 6. Plant communities, interspersion					
subtotal	max20pts	6a. Wetland Vegetation Communities	Vegetati	on Community Cover Scale			
		Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.2471 acres) contiguous area			
		Aquatic bed		Preset and either commprises small part of wetland's			
		2 Emergent		vegetation and is of moderate quality, or comprises a			
	2	0 Shrub	1	significant part but is of low quality.			
		Forest		Present and either comprises significant part of wetland's			
		Mudflats		vegetation and is of moderate quality or comprises a small			
		Open water	2	part and is of hgh quality.			
		Other		Present and comprises significant part or more of wetland's			
		6b. Horizontal (plan view) interspersion.	3	vegetation and is of high quality.			
		Select only one.	Narrative	e Description of Vegetation Quality			
		High (5)		Low spp diversity and/or predominance of nonnative or			
		Moderately high (4)	low	disturbance tolerant native species			
	3	3 Moderate (3)		Native spp are dominant component of the vegetation,			
		Moderately low (2)		although nonnative and/or distrubance tolerant native spp			
		Low (1)		can also be present, and species diversity moderate to			
		None (o)		moderately high, but generally w/o presence of rare,			
		6c. Coverage of invasive plants. Refer to Table 1 ORAM	mod	threatened or endangered spp.			
		long form for list. Add or deduct points for coverage.		A predominance of native species, with nonative spp			
		Extensive >75% cover (-5)		and/or disturbance tolerant native spp apbsent or virtually			
	_	-3 Moderate 25-75% cover (-3)		absent, and high spp diversity and often, but not always,			
	-3	Sparse 5-25% cover (-1)	high	the presence of rare, threatened or endangered spp			
		Nearly absent <5% cover (0)	Mudflat a	and Open Water Class Quality			
		Absent (1)	0	Absent			
		6d. Microtopoghraphy	1	Low 0.1 to 1ha (0.247 to 2.47 acres)			
		Score all present using 1 to 3 scale.	2	Moderate 1 to <4ha (2.47 to 9.88 acres)			
		Vegetated hummocks/tussocks	3	High 4ha (9.88 acres) or more			
		2 Coarse woody debris > 15cm (6in)	Microtop	ography Cover Scale			
	4	1 Standing dead >25cm (10in) dbh	0	Absent			
		1 Amphibian breeding pools	1	Present very small amounts or if more common of marginal quality			
		·		Present in moderate amounts, but not of highest quality or in small			
			2	amounts of highest quality			
				Book of the form of the first o			

39.5 GRAND TOTAL (max 100 pts)

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html last revised 1 February 2001 jjm

Comments:

End of Quantitative Rating. Complete Categorization Worksheets.

# **ORAM Summary Worksheet**

		YES	NO	Result
Narrative Rating	Question 1 Critical Habitat		<b>V</b>	If yes, Category 3.
	Question 2. Threatened or Endangered Species		<b>√</b>	If yes, Category 3.
	Question 3. High Quality Natural Wetland		<b>V</b>	If yes, Category 3.
	Question 4. Significant bird habitat		<b>V</b>	If yes, Category 3.
	Question 5. Category 1 Wetlands		<b>✓</b>	If yes, Category 1.
	Question 6. Bogs		<b>✓</b>	If yes, Category 3.
	Question 7. Fens		<b>✓</b>	If yes, Category 3.
	Question 8a. Old Growth Forest		<b>✓</b>	If yes, Category 3.
	Question 8b. Mature Forested Wetland		7	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted		7	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with		<b>V</b>	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants		7	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings		<b>V</b>	If yes, Category 3
	Question 11. Relict Wet Prairies		7	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	1		
	Metric 2. Buffers and surrounding land use	6		
	Metric 3. Hydrology	16		
	Metric 4. Habitat	10.5		
	Metric 5. Special Wetland Communities	0		
	Metric 6. Plant communities, interspersion, microtopography	6		
	TOTAL SCORE	39.5		Category based on score breakpoints

**Complete Wetland Categorization Worksheet.** 

# **Wetland Categorization Worksheet**

Choices	Yes	NO	Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	Wetland is categorized as a Category 3 wetland	V	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over- categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	Wetland should be evaluated for possible Category 3 status	V	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	Wetland is categorized as a Category 1 wetland	V	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	Wetland is assigned to the appropriate category based on the scoring range		If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	✓	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
(in the case of moderate functions) or	undercategorized by this method. A written justification for	Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category
CAT MOD 2

**End of Ohio Rapid Assessment Method for Wetlands.** 

# **Background Information**

Name:		
	Emily Nagle	
Date:	8/23/2022	
Affiliation:	CT Consultants	
Address:	8150 Sterling Court, Mentor Ohio	
Phone Number:	440-417-6698	
e-mail address:	enagle@ctconsultants.com	
Name of Wetland:	W-S	
Vegetation Communit(ies):	Forested	
HGM Class(es):	Depressional	
Lat/Long or UTM Coordin	nate	41.241842° -81.474311°
Lat/Long or UTM Coordir USGS Quad Name	nate	
_	nate	-81.474311°
USGS Quad Name	nate	-81.474311° Hudson
USGS Quad Name County	nate	-81.474311° Hudson Summit
USGS Quad Name County City/Township	nate	-81.474311° Hudson Summit Hudson
USGS Quad Name County City/Township Section and Subsection	nate	-81.474311° Hudson Summit Hudson T4N R10W
USGS Quad Name County City/Township Section and Subsection Hydrologic Unit Code		-81.474311° Hudson Summit Hudson T4N R10W 041100020401
USGS Quad Name County City/Township Section and Subsection Hydrologic Unit Code Site Visit	ry Map	-81.474311° Hudson Summit Hudson T4N R10W 041100020401 6/22/2022 and 8/16/2022

See Attached

Delineation report/map

Name of Wetland:	W-S
Wetland Size (acres, hectares):	0.12
Sketch: Include north arrow, relationship with other st	urface waters, vegetation zones, etc.
Sketch: Include north arrow, relationship with other states and the states are stated as a state of the state	arface waters, vegetation zones, etc.
Comments, Narrative Discussion, Justification of Categor	v Changas
Final score : 42	Category: Modified CAT 2

### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries.

use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	<b>V</b>	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	<b>V</b>	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	V	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	V	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	V	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	V	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

### **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on Information obtained from the site visit or the literature and by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means

the wetland is listed in the appropriate State of Ohio database.

#	Question	YES	NO	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species?  Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Wetland should be evaluated for possible Category 3 status. Go to Question 2	Go to Question 2	<b>▽</b>
2	<b>Threatened or Endangered Species.</b> Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	Wetland is a Category 3 wetland. Go to Question 3	Go to Question 3	<b>√</b>
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	Wetland is a Category 3 wetland. Go to Question 4	Go to Question 4	<b>√</b>
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland. Go to Question 5	Go to Question 5	<b>V</b>
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Wetland is a Category 3 wetland. Go to Question 6	Go to Question 6	<b>✓</b>
6	<b>Bogs.</b> Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Wetland is a Category 3 wetland. Go to Question 7	Go to Question 7	7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	Wetland is a Category 3 wetland. Go to Question 8	Go to Question 8a	✓
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or o evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Wetland is a Category 3 wetland. Go to Question 8b	Go to Question 8b	<b>✓</b>

8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?  Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation			Wetland should be evaluated for possible Category 3 status Go to Question 9a	Go to Question 9a
9a		on the USGS map, adjacent to this		Go to Question 9b	Go to Question 10
9b	, ,			Wetland should be evaluated for possible Category 3 status Go to Question 9d	Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.			Go to Question 9d	Go to Question 9d
9d	present?			Wetland is a Category 3 wetland. Go to Question 10	Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?			Wetland should be evaluated for possible Category 3 status. Go to Question 10	Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.			Wetland is a Category 3 wetland. Go to Question 11	Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated b or all of the species in Table 1. Extensive prairies were formerly located in the I Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, ar Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), ar portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Vaetc.).		e formerly located in the Darby s (Wyandot, Crawford, and icas, Wood Counties), and	Wetland should be evaluated for possible Category 3 status. Complete Quantitative Rating.	Complete Quantitative Rating.
	. Characteristic pl	•			<del></del>
invasive/exotic spp  Lythrum salicaria Myriophyllum spicatum Najas minor Phalaris arundinacea Phragmites australis Potamogeton crispus Ranunculus ficaria Rhamnus frangula Typha angustifolia Typha xglauca		fen species  Zvzadenus elezans var. glaucus Cacalia plantaginea Carex flava Carex sterilis Carex stricta Deschampsia caespitosa Eleocharis rostellata Eriophorum viridicarinatum Gentianopsis spn. Lobelia kalmii Parnassia glauca Potentilla fruticosa Rhamnus alnifolia Rhynchospora capillacea Salix candida Salix nerissima Solidago ohioensis Tofieldia glutinosa Triglochin maritimum	bog species  Calla palustris Carex atlantica var. capillacea Carex echinata Carex oligosperma Chamaedaphne calyculata Decodon verticillatus Eriophorum virginicum Larix laricina Nemopanthus mucronatus Schechzeria palustris Sphagnum spp. Vaccinium macrocarpon Vaccinium oxycoccos Woodwardia virginica Xyris difformis	Oak Opening species  Carex Carvytolepis  Carex lasiocarpa  Carex stricta  Cladium mariscoides  Calamagrostis stricta  Calamagrostis canaden:  Quercus palustris	Calamagrostis Calamogrostis stricta Carex atherodes Carex buxbaumii Carex pellita

	_	Form Quantitative Rating		
Site	: Laurel La	ake Rater(s): Emily Nagle, Lindsey Jakovljevic	<b>Date:</b> 8/26/2	2
1	1	Wetland: W-S		
subtotal	max6pts	Metric 1. Wetland Area (size). Select one size class and assign score.	42	MOD 2
	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 (0.12="" (1.2="" (2="" (3="" 0.3="" 1<="" <1.2ha)="" <3="" <4ha)="" acres="" pts)="" td="" to=""><td>Final Score</td><td>Category</td></acres>	Final Score	Category
10	9	Metric 2. Upland buffers and surrounding land use.		
subtotal	max14pts	Za. Calculate average buffer width. Select only one and assign score. Do not double check.  WIDE. Buffers average 50m (164 ft) or more around wetland perimter (7)  MEDIUM. Buffers average 25m to <50m (82 to <164 ft) around wetland perimeter (4)  NARROW. Buffers average 10m to <25m (32 ft to <82 ft) around wetland perimter (1)  VERY NARROW. Buffers average <10m (<32ft) around wetland perimter (0)  2b. Intensity of surrounding land use. Select one or double check and average.		
	5	7 VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7) LOW. Old field (>10 years), shrubland, young second growth forest. (5)  3 MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3) HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)		
25	15	Metric 3. Hydrology.		
subtotal	1 1 1	1 Precipitation (1) 3 1 Part of wetland/upl Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5) 3d. Duration inundation/satu	h (1) ke and other human us land (e.g. forest), comp upland corridor (1) ration. Score one of the inundated/saturated d/saturated (3)	lex (1)
	7	1 >0.4m (<15.7in) (1) Seasonally saturat  3e. Modifications to natural hydrologic regime. Score one or double check and average.  None or none apparent (12)  Recovered (7) Check all disturbances observed	rce (non stormwater)	
38	13	Metric 4. Habitat alteration and development.		
subtotal	max20pts	4a. Substrate disturbance. Score one or dbl check and average.  None or none apparent (4)  Recovered (3)  Recovering (2)  Recent or no recovery (1)  4b. Habitat development. Select only one and assign score.  Excellent (7)  4c. Habitat alteration. Score one or dbl check and average.  Recovering (4)  Recovered (6)  Recovering (3)  Recent or no recovery (1)	arent (9)	nd average.
	3	Moderately good (4)  3 Fair (3)  Poor to fair (2)  Poor (1)  grazing herbaceo clearcutting sediments grazing sediments grazing dredging dredging dredging dredging farming	oling removal us/aquatic bed remova ation nrichment	ıl
	38			

Subtotal this page
last revised 1 February 2001 jjm

	ld Form Quantitative Ra	ating		
Site: Laurel	Lake R	ater(s): Emily Nagle,	Lindsey J	Jakovljevic Date: 8/26/22
		Wetlan	d: W-S	
38				
<u> </u>				
Subtotal1st pa	ge			
00 0	7 <b> </b>			
38 0	Metric 5. Special W			
btotal max10pts	Check all that apply and sco	re as indicated.		
	Bog (10)			
	Fen (10)	40)		
	Old growth forest (  Mature forested we	•		
0	¬ <del> </del>	etiand (5) tributary wetland-unrestricted hydro	ology (10)	
		tributary wetland-restricted hydrolog		
		rairies (Oak Openings) (10)	gy ( <i>3)</i>	
	Relict Wet Prairies			
		state/federal threatened or endang	ered species (	(10)
		ry songbird/water fowl habitat or us		( · · )
	Category 1 Wetlan	d. See question 1 Qualitative Ratir	ng - 10	
	<u></u>			
12 4	Metric 6. Plant com	munities, interspersion	. microto	pography.
total max20pts	6a. Wetland Vegetation Cor			on Community Cover Scale
	Score all present using 0 to	3 scale.	0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
	Aquatic bed			Preset and either commprises small part of wetland's
	1 Emergent			vegetation and is of moderate quality, or comprises a
2	0 Shrub		1	significant part but is of low quality.
•	1 Forest			Present and either comprises significant part of wetland's
	Mudflats			vegetation and is of moderate quality or comprises a small
	Open water		2	part and is of hgh quality.
	Other			Present and comprises significant part or more of wetland's
	6b. Horizontal (plan view) in	terspersion.	3	vegetation and is of high quality.
	Select only one.		Narrative	e Description of Vegetation Quality
	High (5)			Low spp diversity and/or predominance of nonnative or
	Moderately high (4	)	low	disturbance tolerant native species
3	3 Moderate (3)			Native spp are dominant component of the vegetation,
	Moderately low (2)			although nonnative and/or distrubance tolerant native spp
	Low (1) None (o)			can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare,
		anta Bafar ta Tabla 1 OBAM	mad	
		ants. Refer to Table 1 ORAM or deduct points for coverage.	mod	threatened or endangered spp.  A predominance of native species, with nonative spp
	Extensive >75% co			and/or disturbance tolerant native spp apbsent or virtually
	-3 Moderate 25-75%			absent, and high spp diversity and often, but not always,
-3	Sparse 5-25% cov	* *	high	the presence of rare, threatened or endangered spp
<u></u>	Nearly absent <5%	* *		and Open Water Class Quality
	Absent (1)		0	Absent
	6d Microtopoghraphy		1	Low 0.1 to 1ho (0.247 to 2.47 perce)

# 42.0 GRAND TOTAL (max 100 pts)

Score all present using 1 to 3 scale.

Vegetated hummocks/tussocks

Coarse woody debris > 15cm (6in) Standing dead >25cm (10in) dbh Amphibian breeding pools

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html last revised 1 February 2001 jjm

Comments:

End of Quantitative Rating. Complete Categorization Worksheets.

Moderate 1 to <4ha (2.47 to 9.88 acres)

Present very small amounts or if more common of marginal quality

Present in moderate amounts, but not of highest quality or in small

Present in moderate or greater amounts and of highest quality

High 4ha (9.88 acres) or more

amounts of highest quality

Microtopography Cover Scale

# **ORAM Summary Worksheet**

		YES	NO	Result
Narrative Rating	Question 1 Critical Habitat		<b>V</b>	If yes, Category 3.
	Question 2. Threatened or Endangered Species		<b>√</b>	If yes, Category 3.
	Question 3. High Quality Natural Wetland		<b>V</b>	If yes, Category 3.
	Question 4. Significant bird habitat		<b>V</b>	If yes, Category 3.
	Question 5. Category 1 Wetlands		<b>✓</b>	If yes, Category 1.
	Question 6. Bogs		<b>✓</b>	If yes, Category 3.
	Question 7. Fens		<b>✓</b>	If yes, Category 3.
	Question 8a. Old Growth Forest		<b>V</b>	If yes, Category 3.
	Question 8b. Mature Forested Wetland		7	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted		7	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants		<b>√</b>	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants		7	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings		<b>V</b>	If yes, Category 3
	Question 11. Relict Wet Prairies		7	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	1		
	Metric 2. Buffers and surrounding land use	9		
	Metric 3. Hydrology	15		
	Metric 4. Habitat	13		
	Metric 5. Special Wetland Communities	0		
	Metric 6. Plant communities, interspersion, microtopography	4		
	TOTAL SCORE			Category based on score breakpoints

**Complete Wetland Categorization Worksheet.** 

# **Wetland Categorization Worksheet**

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

Final Category

Modified CAT 2

**End of Ohio Rapid Assessment Method for Wetlands.** 

### **Background Information**

	<u> </u>	
Name:	Emily Nagle	
Date:	8/23/2022	
Affiliation:	CT Consultants	
Address:	8150 Sterling Court, Mentor Ohio	
Phone Number:	440-417-6698	
e-mail address:	enagle@ctconsultants.com	
Name of Wetland:	W-T	
Vegetation Communit(ies):	Forested	
HGM Class(es):	Depressional	
Lat/Long or UTM Coordin	ate	41.241492°
USGS Quad Name		-81.472615° Hudson
County		Summit
City/Township		Hudson
Section and Subsection		T4N R10W
Hydrologic Unit Code	041100020401	
Site Visit	8/16/2022	
National Wetland Inventor	Na	
Ohio Wetland Inventory M	ap	Na
Soil Survey		Ca
Delineation report/map See Attached		

Name of Wetland:	W-T			
Wetland Size (acres, hectares):	0.19			
Sketch: Include north arrow, relationship with other surface wa	ters, vegetation zones, etc.			
See Attached.	_			
Comments, Narrative Discussion, Justification of Category Changes	S:			
Final score : 39.5	Category: Modified CAT 2			

### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries.

use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	<b>V</b>	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	<b>V</b>	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	V	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	V	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	V	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	V	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

### **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on Information obtained from the site visit or the literature and by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means

the wetland is listed in the appropriate State of Ohio database.

#	Question	YES	NO	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species?  Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Wetland should be evaluated for possible Category 3 status. Go to Question 2	Go to Question 2	<b>▽</b>
2	<b>Threatened or Endangered Species.</b> Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	Wetland is a Category 3 wetland. Go to Question 3	Go to Question 3	<b>▽</b>
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	Wetland is a Category 3 wetland. Go to Question 4	Go to Question 4	✓
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland. Go to Question 5	Go to Question 5	<b>√</b>
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Wetland is a Category 3 wetland. Go to Question 6	Go to Question 6	<b>√</b>
6	<b>Bogs.</b> Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Wetland is a Category 3 wetland. Go to Question 7	Go to Question 7	7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	Wetland is a Category 3 wetland. Go to Question 8	Go to Question 8a	✓
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or on evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Wetland is a Category 3 wetland. Go to Question 8b	Go to Question 8b	<b>V</b>

8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?  Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation			Wetland should be evaluated for possible Category 3 status Go to Question 9a	Go to Question 9a
9a		on the USGS map, adjacent to this		Go to Question 9b	Go to Question 10
9b	, ,			Wetland should be evaluated for possible Category 3 status Go to Question 9d	Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.			Go to Question 9d	Go to Question 9d
9d	present?			Wetland is a Category 3 wetland. Go to Question 10	Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?			Wetland should be evaluated for possible Category 3 status. Go to Question 10	Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.			Wetland is a Category 3 wetland. Go to Question 11	Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated b or all of the species in Table 1. Extensive prairies were formerly located in the I Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, ar Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), ar portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Vaetc.).		e formerly located in the Darby s (Wyandot, Crawford, and icas, Wood Counties), and	Wetland should be evaluated for possible Category 3 status. Complete Quantitative Rating.	Complete Quantitative Rating.
	. Characteristic pl	•			<del></del>
invasive/exotic spp  Lythrum salicaria Myriophyllum spicatum Najas minor Phalaris arundinacea Phragmites australis Potamogeton crispus Ranunculus ficaria Rhamnus frangula Typha angustifolia Typha xglauca		fen species  Zvzadenus elezans var. glaucus Cacalia plantaginea Carex flava Carex sterilis Carex stricta Deschampsia caespitosa Eleocharis rostellata Eriophorum viridicarinatum Gentianopsis spn. Lobelia kalmii Parnassia glauca Potentilla fruticosa Rhamnus alnifolia Rhynchospora capillacea Salix candida Salix nerissima Solidago ohioensis Tofieldia glutinosa Triglochin maritimum	bog species  Calla palustris Carex atlantica var. capillacea Carex echinata Carex oligosperma Chamaedaphne calyculata Decodon verticillatus Eriophorum virginicum Larix laricina Nemopanthus mucronatus Schechzeria palustris Sphagnum spp. Vaccinium macrocarpon Vaccinium oxycoccos Woodwardia virginica Xyris difformis	Oak Opening species  Carex Carvytolepis  Carex lasiocarpa  Carex stricta  Cladium mariscoides  Calamagrostis stricta  Calamagrostis canaden:  Quercus palustris	Calamagrostis Calamogrostis stricta Carex atherodes Carex buxbaumii Carex pellita

ORAM	ORAM v. 5.0 Field Form Quantitative Rating								
Site	: Laurel L	ake	Rater(s):	Emily Nagle,	Lindsey J	akovljevi	ic	<b>Date:</b> 8/26/2	2
1	1			Wetlan	d: W-T				
subtotal	max6pts	Metric 1. W Select one size class	etland Area (	size).	<b>'</b>			39.5	MOD 2
	1	25 to <50 10 to <25 3 to 10 <a 0.3 to &lt;3 1 0.1 to &lt;0</a 	es (<20.2ha) (6 pts) c) acres (10.1 to <20.2ha c) acres (4 to <10.1ha) (4 c) acres (1.2 to <4ha) (3 pt acres (0.12 to <1.2ha) c) acres (0.04 to <0.12ha) c) (0.04 to <0.04ha) (0 pts)	4 pts) s) (2 pts)				Final Score	Category
13	12	Metric 2. U	pland buffers	and surrou	ınding la	nd use.	ı		
subtotal	max14pts	7 WIDE. B MEDIUM NARROV VERY NA 2b. Intensity of sur	age buffer width. Sel Buffers average 50m (16 I. Buffers average 25m W. Buffers average 10r ARROW. Buffers avera rounding land use. S	64 ft) or more around to <50m (82 to <164 in to <25m (32 ft to <8 ige <10m (<32ft) arou lelect one or double	wetland perimte ft) around wetla 32 ft) around wet and wetland peri e check and av	or (7) and perimeter tland perimter imter (0) verage.	(4)		
	5	LOW. O	DW. 2nd growth or olde ld field (>10 years), shri ATELY HIGH. Resident Irban, industrial, open p	ubland, young secondial, fenced pasture, p	d growth forest. eark, conservation	(5) on tillage, new	v fallow field. (3)		
23	10	Metric 3. H	ydrology.						
subtotal	1 1 1	High pH	l/Intermittent surface wa Il surface water (lake or r depth. Select only o	ater (3) stream) (5) one and assign sco	2	3d. Durat	Part of wetland/up Part of riparian or ion inundation/satu Semi-to permaner Regularly inundate Seasonally inunda Seasonally satura	n (1)  ake and other human us  land (e.g. forest), comp  upland corridor (1)  uration. Score one ou  tly inundated/saturated  ad/saturated (3)	lex (1)
	5	7 Recovered 3 Recovered Recent of Re			eck all disturba ditch tile dike weir stormwate				
34.5	11.5 max20pts		tat alteration an	•		4c Habit	at alteration. Scor	e one or dbl check a	nd average
Subtotal	3	None or 4 Recovered Recovered Recent of	none apparent (4) ed (3) ing (2) ir no recovery (1) inent. Select only or		4.5	6 3	None or none app Recovered (6) Recovering (3) Recent or no reco	arent (9)	a aronago.
	4	Very goo Good (5) 4 Moderate Fair (3) Poor to fa Poor (1)	ely good (4)		eck all disturba mowing grazing clearcutting selective c woody deb toxic pollut	g cutting oris removal	shrub/sal herbaced sediment dredging farming	pling removal pus/aquatic bed remova ation enrichment	ıl
	34.5								

Subtotal this page

#### **ORAM v. 5.0 Field Form Quantitative Rating** Date: 8/26/22 Site: Laurel Lake Rater(s): Emily Nagle, Lindsey Jakovljevic Wetland: W-T 34.5 Subtotal1st page 34.5 0 Metric 5. Special Wetlands Check all that apply and score as indicated. max10pts Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) 0 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 39.5 5 Metric 6. Plant communities, interspersion, microtopography. 6a. Wetland Vegetation Communities Vegetation Community Cover Scale cubtotal max20pts Score all present using 0 to 3 scale. Absent or comprises <0.1ha (0.2471 acres) contiguous area Aquatic bed Preset and either commprises small part of wetland's Emergent vegetation and is of moderate quality, or comprises a 2 1 Shrub significant part but is of low quality. Present and either comprises significant part of wetland's Mudflats vegetation and is of moderate quality or comprises a small Open water part and is of hgh quality. Present and comprises significant part or more of wetland's Other 6b. Horizontal (plan view) interspersion. vegetation and is of high quality Select only one. Narrative Description of Vegetation Quality High (5) Low spp diversity and/or predominance of nonnative or Moderately high (4) low disturbance tolerant native species 3 Moderate (3) Native spp are dominant component of the vegetation. Moderately low (2) although nonnative and/or distrubance tolerant native spp Low (1) can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare, 6c. Coverage of invasive plants. Refer to Table 1 ORAM mod threatened or endangered spp. long form for list. Add or deduct points for coverage. A predominance of native species, with nonative spp Extensive >75% cover (-5) and/or disturbance tolerant native spp appsent or virtually Moderate 25-75% cover (-3) absent, and high spp diversity and often, but not always, Sparse 5-25% cover (-1) -1 the presence of rare, threatened or endangered spp Nearly absent <5% cover (0) Mudflat and Open Water Class Quality Absent (1) 0

39.5 GRAND TOTAL (max 100 pts)

6d. Microtopoghraphy

Score all present using 1 to 3 scale.

Vegetated hummocks/tussocks

Coarse woody debris > 15cm (6in) Standing dead >25cm (10in) dbh Amphibian breeding pools

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html last revised 1 February 2001 jjm

Comments:

End of Quantitative Rating. Complete Categorization Worksheets.

Low 0.1 to 1ha (0.247 to 2.47 acres)

amounts of highest quality

Microtopography Cover Scale

1

Moderate 1 to <4ha (2.47 to 9.88 acres) High 4ha (9.88 acres) or more

Present very small amounts or if more common of marginal quality

Present in moderate amounts, but not of highest quality or in small

Present in moderate or greater amounts and of highest quality

### **ORAM Summary Worksheet**

		YES	NO	Result
Narrative Rating	Question 1 Critical Habitat		<b>V</b>	If yes, Category 3.
	Question 2. Threatened or Endangered Species		<b>V</b>	If yes, Category 3.
	Question 3. High Quality Natural Wetland		7	If yes, Category 3.
	Question 4. Significant bird habitat		7	If yes, Category 3.
	Question 5. Category 1 Wetlands		7	If yes, Category 1.
	Question 6. Bogs		7	If yes, Category 3.
	Question 7. Fens		7	If yes, Category 3.
	Question 8a. Old Growth Forest		7	If yes, Category 3.
	Question 8b. Mature Forested Wetland		7	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted		<b>√</b>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with		<b>V</b>	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants		7	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings		<b>V</b>	If yes, Category 3
	Question 11. Relict Wet Prairies		<b>√</b>	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	1		
	Metric 2. Buffers and surrounding land use	12		
	Metric 3. Hydrology	10		
	Metric 4. Habitat	11.5		
	Metric 5. Special Wetland Communities	0		
	Metric 6. Plant communities, interspersion, microtopography	5		
	microtopography TOTAL SCORE			Category based on score breakpoints

**Complete Wetland Categorization Worksheet.** 

### **Wetland Categorization Worksheet**

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

Final Category

Modified CAT 2

**End of Ohio Rapid Assessment Method for Wetlands.** 

### **Background Information**

	В	ackground Info	ormation		
Name:	Emily Nagle				
Date:	8/23/2022				,
Affiliation:	CT Consultants				
Address:	8150 Sterling Court, Mentor Ohio				
Phone Number:	440-417-6698				
e-mail address:	enagle@ctconsultants.com				
Name of Wetland:	W-U				
Vegetation Communit(ies):	Emergent/ Scrub-Shurb/ and Forsted				
HGM Class(es):	Depressiona	1			
Lat/Long or UTM Coordin	ate			41.2425521° -81.4674226°	
USGS Quad Name				Hudson	
County				Summit	
City/Township				Hudson	
Section and Subsection				T4N R10W	

041100020401

N/A

N/A

FcB,Sb, Ca

See Attached

6/23/2022 & 8/16/2022

Hydrologic Unit Code

Delineation report/map

National Wetland Inventory Map

Ohio Wetland Inventory Map

Site Visit

Soil Survey

Name of Wetland:	W-O
Wetland Size (acres, hectares):	5.04 on-site
Sketch: Include north arrow, relationship wit	h other surface waters, vegetation zones, etc.
Sketch: Include north arrow, relationship with See Attached.  Comments, Narrative Discussion, Justification of the state o	
Final score : 52	Category: CAT 2

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries.

use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	<b>V</b>	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	<b>V</b>	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	V	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	V	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	V	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	V	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

#### **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on Information obtained from the site visit or the literature and by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means

the wetland is listed in the appropriate State of Ohio database.

#	Question	YES	NO	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species?  Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Wetland should be evaluated for possible Category 3 status. Go to Question 2	Go to Question 2	<b>▽</b>
2	<b>Threatened or Endangered Species.</b> Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	Wetland is a Category 3 wetland. Go to Question 3	Go to Question 3	<b>√</b>
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	Wetland is a Category 3 wetland. Go to Question 4	Go to Question 4	<b>√</b>
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland. Go to Question 5	Go to Question 5	<b>V</b>
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Wetland is a Category 3 wetland. Go to Question 6	Go to Question 6	<b>✓</b>
6	<b>Bogs.</b> Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Wetland is a Category 3 wetland. Go to Question 7	Go to Question 7	7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	Wetland is a Category 3 wetland. Go to Question 8	Go to Question 8a	✓
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or o evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Wetland is a Category 3 wetland. Go to Question 8b	Go to Question 8b	<b>✓</b>

8b	cover of upper for	wetlands. Is the wetland a forested est canopy consisting of deciduous t ), generally diameters greater than 4	Wetland should be evaluated for possible Category 3 status Go to Question 9a	Go to Question 9a	
9a		I and tributary wetlands. Is the woon the USGS map, adjacent to this accessible to fish?		Go to Question 9b	Go to Question 10
9b	the loss of aquation	the wetland's hydrology result from measures designed to prevent erosion and soft aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake to lakeward or landward dikes or other hydrological controls?  Wetland should be evaluated for possible Category 3 status. Go to Question 9d		Go to Question 9c	
9c	i.e. the wetland is alterations), or the and river influence	er levels the wetland's primary hydro hydrologically unrestricted (no lakew wetland can be characterized as an ed hydrology. These include sandbar buth wetlands, or those dominated by	ard or upland border  "estuarine" wetland with lake deposition wetlands, estuarine	Go to Question 9d	Go to Question 9d
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?			Wetland is a Category 3 wetland. Go to Question 10	Go to Question 9e
9e		have a predominance of non-native on its vegetation communities?	Wetland should be evaluated for possible Category 3 status. Go to Question 10		
10	Henry, or Wood C description: the water table often water table often water table often water table of the gramineous version of the description o	Prairies (Oak Openings) Is the wet counties and can the wetland be char etland has a sandy substrate with inte within several inches of the surface, a egetation listed in Table 1 (woody spu- of Natural Resources Division of Nat e in confirming this type of wetland an	Wetland is a Category 3 wetland. Go to Question 11	Go to Question 11	
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).			Wetland should be evaluated for possible Category 3 status. Complete Quantitative Rating.	Complete Quantitative Rating.
	•	•	<del> </del>		<del> </del>
Lythrum salicaria Zygadenus elegans var. glaucus Ca Myriophyllum spicatum Cacalia plantaginea Ca Phalaris arundinacea Carex Ilava Ca Phalaris arundinacea Carex sterilis Ca Phragmites australis Carex stricta Ca Ranunculus ficaria Eleocharis rostellata De Rhamnus frangula Eriophorum viridicarinatum Er Typha angustifolia Gentianopsis spp. La Typha xglauca Lobelia kalmii Ne Parnassia glauca Sco Potentilla fruticosa Sp Rhamnus alnifolia Va Rhynchospora capillacea Va Salix candida Va Salix myricoides		bog species  Calla palustris Carex atlantica var. capillacea Carex oligosperma Carex trisperma Chamaedaphne calyculata Decodon verticillatus Eriophorum virginicum Larix laricina Nemopanthus mucronatus Schechzeria palustris Sphagnum spp. Vaccinium macrocarpon Vaccinium corymbosum Vaccinium oxycoccos Woodwardia virginica Xyris difformis	Oak Opening species  Carex Carvytolepis  Carex lasiocarpa  Carex stricta  Cladium mariscoides  Calamagrostis stricta  Calamagrostis canaden:  Quercus palustris	Calamagrostis Calamogrostis stricta Carex atherodes Carex buxbaumii Carex pellita	

ORAM v	v. 5.0 Field	Form Quantitative Rating		
Site	Laurel L	ake Rater(s): Emily Nagle, Lindsey Jakovljevic	<b>Date:</b> 6/30/22	2
4	4	Wetland: W-U		
subtotal	max6pts	Metric 1. Wetland Area (size). Select one size class and assign score.	52	2
	4	> 50 acres (<20.2ha) (6 pts)  25 to <50 acres (10.1 to <20.2ha) (5 pts)  4	Final Score	Category
16	12	Metric 2. Upland buffers and surrounding land use.		
subtotal	max14pts 7	2a. Calculate average buffer width. Select only one and assign score. Do not double check.  7 WIDE. Buffers average 50m (164 ft) or more around wetland perimter (7) MEDIUM. Buffers average 25m to <50m (82 to <164 ft) around wetland perimeter (4) NARROW. Buffers average 10m to <25m (32 ft to <82 ft) around wetland perimter (1) VERY NARROW. Buffers average <10m (<32ft) around wetland perimter (0) 2b. Intensity of surrounding land use. Select one or double check and average.  7 VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)		
	5	LOW. Old field (>10 years), shrubland, 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)		
29	13	Metric 3. Hydrology.		
subtotal	max30pts	3a. Sources of water. Score all that apply.  3b. Connectivity. Score all the light pH groundwater (5)  100 year floodplain		se (1)
	1	1 Precipitation (1) 2 Part of wetland/upla Seasonal/Intermittent surface water (3) 1 Part of riparian or uplant or uplant of riparian or uplant or uplant of riparian or uplant or upl	and (e.g. forest), comp upland corridor (1) ration. Score one or dy inundated/saturated d/saturated (3)	lex (1)
		None or none apparent (12)  7 Recovered (7) Check all disturbances observed		
	5	Recovering (3)  Recent or no recovery (1)  Recent or no recovery (1)  dike  dike  dir road  weir  stormwater input  other - cult		
42	13	Metric 4. Habitat alteration and development.		
subtotal	3.5	4a. Substrate disturbance. Score one or dbl check and average.  4 None or none apparent (4)  Recovered (3)  Recovering (2)  Recent or no recovery (1)  4b. Habitat development. Select only one and assign score.  Excellent (7)  4c. Habitat alteration. Score  4c. Habitat alteration. Score  None or none appa  Recovering (3)  Recent or no recovery (1)  Excellent (7)	arent (9)	nd average.
	5			1
Su	42 btotal this page	1		1

	aurel La	ake	Rater(s):	Emily Nagle, L	indsey J	lakovljevic	Date:	6/30/22
		-		Wetland		•		I
	42							
Subto	tal1st page							
2	0	Matria F. Creasia	l Watlanda					
	ax10pts	Metric 5. Specia Check all that apply and		ad				
ai III	axTupis	Bog (10)	score as indicati	eu.				
		Fen (10)						
		Old growth fo	rest (10)					
			ed wetland (5)					
	0	Lake Erie Co	astal/tributary wetla	nd-unrestricted hydrolo	gy (10)			
		Lake Erie Co	astal/tributary wetla	nd-restricted hydrology	(5)			
		Lake Plain Sa	and Prairies (Oak O	penings) (10)				
		Relict Wet Pr	airies (10)					
		Known occur	rence state/federal	threatened or endanger	red species (	10)		
				ater fowl habitat or usag				
		Category 1 W	etland. See questi	ion 1 Qualitative Rating	- 10			
2	10	Metric 6. Plant c	ommunities,	interspersion,	microto <sub>l</sub>	oography.		
al ma	x20pts	<ol><li>6a. Wetland Vegetation</li></ol>	Communities		Vegetation	on Community Cover Scale		
		Score all present using	0 to 3 scale.		0	Absent or comprises <0.1ha (0.2	2471 acres)	contiguous area
		Aquatic bed				Preset and either commprises si		
		1 Emergent				vegetation and is of moderate of		omprises a
<u> </u>	5	2 Shrub			1			
						significant part but is of low quali	•	
		2 Forest				Present and either comprises sig	gnificant par	
		Mudflats				Present and either comprises signed vegetation and is of moderate of	gnificant par	
		Mudflats Open water			2	Present and either comprises signer vegetation and is of moderate of part and is of hgh quality.	gnificant par quality or co	mprises a small
		Mudflats Open water Other	w) interspersion		2	Present and either comprises signed vegetation and is of moderate of part and is of high quality.  Present and comprises significant and comprises s	gnificant par quality or co	mprises a small
		Mudflats Open water Other 6b. Horizontal (plan vie	w) interspersion.		2	Present and either comprises signer vegetation and is of moderate of part and is of hgh quality.	gnificant par quality or co nt part or m	mprises a small
		Mudflats Open water Other 6b. Horizontal (plan vie Select only one.	w) interspersion.		2	Present and either comprises signegetation and is of moderate of part and is of high quality.  Present and comprises significative getation and is of high quality.  Description of Vegetation Quality	gnificant par quality or co nt part or m y. lity	omprises a small
		Mudflats Open water Other 6b. Horizontal (plan vie			2	Present and either comprises signer vegetation and is of moderate of part and is of high quality.  Present and comprises significative getation and is of high quality.	gnificant par quality or co nt part or m y. lity	omprises a small
	4	Mudflats Open water Other 6b. Horizontal (plan vie Select only one. High (5)			2 3 Narrative	Present and either comprises signegetation and is of moderate of part and is of high quality.  Present and comprises significan vegetation and is of high quality.  Description of Vegetation Quality.  Low spp diversity and/or predom	gnificant par quality or co nt part or m y. lity ninance of n cies	ore of wetland's
	4	Mudflats Open water Other 6b. Horizontal (plan vie Select only one. High (5) 4 Moderately hi	gh (4)		2 3 Narrative	Present and either comprises signegetation and is of moderate of part and is of high quality.  Present and comprises significative getation and is of high quality.  Description of Vegetation Quality.  Low spp diversity and/or predom disturbance tolerant native spe	gnificant par quality or co nt part or m y. lity ninance of n cies	ore of wetland's onnative or vegetation,
	4	Mudflats Open water Other 6b. Horizontal (plan vie Select only one.  High (5) 4 Moderately hi Moderate (3)	gh (4)		2 3 Narrative	Present and either comprises signegatation and is of moderate of part and is of high quality.  Present and comprises significative getation and is of high quality.  Description of Vegetation Quality.  Low spp diversity and/or predom disturbance tolerant native spe  Native spp are dominant composition.	gnificant pai quality or co nt part or m y. lity ninance of n cies nent of the v	ore of wetland's  onnative or  vegetation,  erant native spp
	4	Mudflats Open water Other 6b. Horizontal (plan vie Select only one. High (5) 4 Moderately hi Moderately lo	gh (4)		2 3 Narrative	Present and either comprises signegatation and is of moderate of part and is of high quality.  Present and comprises significative getation and is of high quality.  Description of Vegetation Quality.  Low spp diversity and/or predom disturbance tolerant native spe  Native spp are dominant composalthough nonnative and/or distress.	gnificant pai quality or co nt part or m y. lity ninance of n cies nent of the v ubance tole es diversity	onnative or vegetation, erant native spp moderate to
	4	Mudflats Open water Other 6b. Horizontal (plan vie Select only one. High (5) 4 Moderately hi Moderately lo Low (1)	gh (4) w (2)	to Table 1 ORAM	2 3 Narrative	Present and either comprises signegatation and is of moderate of part and is of high quality.  Present and comprises significative segetation and is of high quality.  Description of Vegetation Qual Low spp diversity and/or predom disturbance tolerant native spe  Native spp are dominant compoul although nonnative and/or district can also be present, and specimoderately high, but generally threatened or endangered spp.	gnificant par quality or co nt part or m /. lity ninance of n cies nent of the vubance tole es diversity w/o presence	onnative or vegetation, erant native spp moderate to be of rare,
	4	Mudflats Open water Other 6b. Horizontal (plan vie Select only one.  High (5) 4 Moderately hi Moderately lo Low (1) None (o) 6c. Coverage of invasin long form for list. A	gh (4) w (2) /e plants. Refer t		3 Narrative	Present and either comprises signesses vegetation and is of moderate of part and is of high quality.  Present and comprises significative vegetation and is of high quality.  Description of Vegetation Quality.  Low spp diversity and/or predomedisturbance tolerant native special Native spp are dominant compound although nonnative and/or district can also be present, and specimoderately high, but generally threatened or endangered spp.  A predominance of native species	anificant par quality or co nt part or m /. lity ninance of n cies nent of the v ubance tole es diversity w/o presencess, with non	onnative or vegetation, erant native spp moderate to be of rare, ative spp
	4	Mudflats Open water Other 6b. Horizontal (plan vie Select only one.  High (5) 4 Moderately hi Moderately lo Low (1) None (o) 6c. Coverage of invasis long form for list. A Extensive >7:	gh (4) w (2) ve plants. Refer to the control or deduct points cover (-5)		3 Narrative	Present and either comprises signesses vegetation and is of moderate of part and is of high quality.  Present and comprises significative vegetation and is of high quality.  Description of Vegetation Quality.  Low spp diversity and/or predom disturbance tolerant native spe Native spp are dominant compositive spp are dominant composition and so be present, and species moderately high, but generally threatened or endangered spp.  A predominance of native species and/or disturbance tolerant native	anificant part or my.  Itity  Ininance of n cicles  Inent of the vubance tole  Be diversity  Inent of the vubance tole	onnative or vegetation, erant native spp moderate to ce of rare, ative spp sent or virtually
		Mudflats Open water Other 6b. Horizontal (plan vie Select only one.  High (5) 4 Moderately hi Moderately lo Low (1) None (0) 6c. Coverage of invasis long form for list. A Extensive >75 Moderate 25-	gh (4) w (2) /e plants. Refer ( dd or deduct poil 5% cover (-5) 75% cover (-3)		3 Narrative low	Present and either comprises signegatation and is of moderate of part and is of high quality.  Present and comprises significate vegetation and is of high quality.  Present and comprises significate vegetation and is of high quality.  Description of Vegetation Quality.  Low spp diversity and/or predom disturbance tolerant native spe Native spp are dominant compour although nonnative and/or district an also be present, and specification moderately high, but generally threatened or endangered spp.  A predominance of native specificand/or disturbance tolerant native absent, and high spp diversity and signerated in the second se	gnificant par quality or co nt part or m y. litty ninance of n cies ment of the v ubbance tole es diversity w/o presence es, with non ive spp apb and often, b	ore of wetland's  onnative or  vegetation,  prant native spp moderate to be of rare,  ative spp sent or virtually ut not always,
	4 -1	Mudflats Open water Other 6b. Horizontal (plan vie Select only one.  High (5) 4 Moderately hi Moderately lo Low (1) None (o) 6c. Coverage of invasiv long form for list. A Extensive >7: Moderate 25- Sparse 5-25%	gh (4) w (2) ve plants. Refer t dd or deduct poi 5% cover (-5) 75% cover (-3) 6 cover (-1)		3 Narrative low mod	Present and either comprises signer vegetation and is of moderate of part and is of high quality.  Present and comprises significative getation and is of high quality.  Present and comprises significative getation and is of high quality.  Description of Vegetation Quality.  Low spp diversity and/or predom disturbance tolerant native spe.  Native spp are dominant composition allowed present, and specimoderately high, but generally threatened or endangered spp.  A predominance of native species and/or disturbance tolerant nativation and or disturbance tolerant nativation and the presence of rare, threatened or early threatened.	gnificant par quality or co nt part or m y. litty ninance of n cies ment of the v ubbance tole es diversity w/o presence es, with non ive spp apb and often, b	ore of wetland's  onnative or  vegetation,  prant native spp moderate to be of rare,  ative spp sent or virtually ut not always,
		Mudflats Open water Other 6b. Horizontal (plan vie Select only one.  High (5) 4 Moderately hi Moderately lo Low (1) None (0) 6c. Coverage of invasiv long form for list. A Extensive >7: Moderate 25- 1 Sparse 5-259 Nearly absen	gh (4) w (2) /e plants. Refer ( dd or deduct poil 5% cover (-5) 75% cover (-3)		2 3 Narrative low mod	Present and either comprises signer vegetation and is of moderate of part and is of high quality.  Present and comprises significative getation and is of high quality.  Description of Vegetation Quality.  Low spp diversity and/or predom disturbance tolerant native spe Native spp are dominant compound although nonnative and/or district can also be present, and species moderately high, but generally threatened or endangered spp.  A predominance of native species and/or disturbance tolerant nativ	gnificant par quality or co nt part or m y. litty ninance of n cies ment of the v ubbance tole es diversity w/o presence es, with non ive spp apb and often, b	ore of wetland's  onnative or  vegetation,  prant native spp moderate to be of rare,  ative spp sent or virtually ut not always,
		Mudflats Open water Other 6b. Horizontal (plan vie Select only one.  High (5) 4 Moderately hi Moderately lo Low (1) None (o) 6c. Coverage of invasiv long form for list. A Extensive >7: Moderate 25- Sparse 5-25%	gh (4) w (2) ve plants. Refer t dd or deduct poi 5% cover (-5) 75% cover (-3) 6 cover (-1)		3 Narrative low mod	Present and either comprises signer vegetation and is of moderate of part and is of high quality.  Present and comprises significative getation and is of high quality.  Present and comprises significative getation and is of high quality.  Description of Vegetation Quality.  Low spp diversity and/or predom disturbance tolerant native spe.  Native spp are dominant composition allowed present, and specimoderately high, but generally threatened or endangered spp.  A predominance of native species and/or disturbance tolerant nativation and or disturbance tolerant nativation and the presence of rare, threatened or early threatened.	gnificant par quality or co nut part or m //. Ility ninance of n cies nent of the v ubance tole es diversity w/o presences, with non vive spp apb and often, b	ore of wetland's  onnative or  vegetation,  erant native spp moderate to be of rare,  ative spp sent or virtually ut not always,

### 52.0 GRAND TOTAL (max 100 pts)

Vegetated hummocks/tussocks

Coarse woody debris > 15cm (6in) Standing dead >25cm (10in) dbh Amphibian breeding pools

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html last revised 1 February 2001 jjm

Comments:

End of Quantitative Rating. Complete Categorization Worksheets.

High 4ha (9.88 acres) or more

amounts of highest quality

Present very small amounts or if more common of marginal quality

Present in moderate amounts, but not of highest quality or in small

Present in moderate or greater amounts and of highest quality

Microtopography Cover Scale

### **ORAM Summary Worksheet**

		YES	NO	Result
Narrative Rating	Question 1 Critical Habitat		<b>V</b>	If yes, Category 3.
	Question 2. Threatened or Endangered Species		<b>V</b>	If yes, Category 3.
	Question 3. High Quality Natural Wetland		<b>V</b>	If yes, Category 3.
	Question 4. Significant bird habitat		<b>V</b>	If yes, Category 3.
	Question 5. Category 1 Wetlands		<b>V</b>	If yes, Category 1.
	Question 6. Bogs		<b>V</b>	If yes, Category 3.
	Question 7. Fens		<b>V</b>	If yes, Category 3.
	Question 8a. Old Growth Forest		<b>V</b>	If yes, Category 3.
	Question 8b. Mature Forested Wetland		7	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted		7	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with		<b>V</b>	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants		<b>V</b>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings		<b>V</b>	If yes, Category 3
	Question 11. Relict Wet Prairies		7	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	4		
	Metric 2. Buffers and surrounding land use	12		
	Metric 3. Hydrology	13		
	Metric 4. Habitat	13		
	Metric 5. Special Wetland Communities	0		
	Metric 6. Plant communities, interspersion, microtopography	10		
	TOTAL SCORE	52		Category based on score breakpoints

**Complete Wetland Categorization Worksheet.** 

### **Wetland Categorization Worksheet**

Choices	Yes	NO	Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	Wetland is categorized as a Category 3 wetland	V	Is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over- categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	Wetland should be evaluated for possible Category 3 status	V	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	Wetland is categorized as a Category 1 wetland	V	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	Wetland is assigned to the appropriate category based on the scoring range		If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	✓	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
(in the case of moderate functions) or	undercategorized by this method. A written justification for	Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category

CAT 2

**End of Ohio Rapid Assessment Method for Wetlands.** 

### **Background Information**

	<u> </u>		
Name:	Emily Nagle		
Date:	6/30/2022		
Affiliation:	CT Consultants		
Address:	8150 Sterling Court, Mentor Ohio		
Phone Number:	440-417-6698		
e-mail address:	enagle@ctconsultants.com		
Name of Wetland:	W-V		
Vegetation Communit(ies):	Forested		
HGM Class(es):	Depressional		
Lat/Long or UTM Coordir	ate	41.2453660° -81.4679608°	
USGS Quad Name		Hudson	
County		Summit	
City/Township		Hudson	
Section and Subsection		T4N R10W	
Hydrologic Unit Code		041100020401	
Site Visit		6/23/2022	
National Wetland Inventor	y Map	N/A	
Ohio Wetland Inventory M	Iap	N/A	
Soil Survey		FcB	
Delineation report/map See Attached			

Name of Wetland:	W-V
Wetland Size (acres, hectares):	0.08
Sketch: Include north arrow, relationship with othe	r surface waters, vegetation zones, etc.
Sketch: Include north arrow, relationship with other See Attached.	er surface waters, vegetation zones, etc.
Comments, Narrative Discussion, Justification of Cate	gory Changes:
Final score: 37	Category: Modified CAT 2

#### **Scoring Boundary Worksheet**

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries.

use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	<b>V</b>	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human- induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	<b>V</b>	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	V	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	V	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	V	
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	V	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

#### **Narrative Rating**

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on Information obtained from the site visit or the literature and by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means

the wetland is listed in the appropriate State of Ohio database.

#	Question	YES	NO	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species?  Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Wetland should be evaluated for possible Category 3 status. Go to Question 2	Go to Question 2	<b>▽</b>
2	<b>Threatened or Endangered Species.</b> Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	Wetland is a Category 3 wetland. Go to Question 3	Go to Question 3	<b>√</b>
3	<b>Documented High Quality Wetland.</b> Is the wetland on record in Natural Heritage Database as a high quality wetland?	Wetland is a Category 3 wetland. Go to Question 4	Go to Question 4	<b>√</b>
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category 3 wetland. Go to Question 5	Go to Question 5	<b>V</b>
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	Wetland is a Category 3 wetland. Go to Question 6	Go to Question 6	<b>✓</b>
6	<b>Bogs.</b> Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	Wetland is a Category 3 wetland. Go to Question 7	Go to Question 7	7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	Wetland is a Category 3 wetland. Go to Question 8	Go to Question 8a	✓
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or o evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Wetland is a Category 3 wetland. Go to Question 8b	Go to Question 8b	<b>✓</b>

8b	cover of upper for	wetlands. Is the wetland a forested est canopy consisting of deciduous t ), generally diameters greater than 4	rees with large diameters at	Wetland should be evaluated for possible Category 3 status Go to Question 9a	Go to Question 9a
9a		I and tributary wetlands. Is the woon the USGS map, adjacent to this accessible to fish?		Go to Question 9b	Go to Question 10
9b	the loss of aquation	s hydrology result from measures de plants, i.e. the wetland is partially hy ard or landward dikes or other hydrol	ydrologically restricted from Lake	Wetland should be evaluated for possible Category 3 status Go to Question 9d	Go to Question 9c
9c	i.e. the wetland is alterations), or the and river influence	er levels the wetland's primary hydro hydrologically unrestricted (no lakew wetland can be characterized as an ed hydrology. These include sandbar buth wetlands, or those dominated by	ard or upland border  "estuarine" wetland with lake deposition wetlands, estuarine	Go to Question 9d	Go to Question 9d
9d		have a predominance of native spec ough non-native or disturbance tolera	o o	Wetland is a Category 3 wetland. Go to Question 10	Go to Question 9e
9e		have a predominance of non-native on its vegetation communities?	or disturbance tolerant native	Wetland should be evaluated for possible Category 3 status. Go to Question 10	Go to Question 10
10	Henry, or Wood C description: the water table often water table often water table often water table of the gramineous version of the description o	Prairies (Oak Openings) Is the wet counties and can the wetland be char etland has a sandy substrate with inte within several inches of the surface, a egetation listed in Table 1 (woody spu- of Natural Resources Division of Nat e in confirming this type of wetland an	acterized by the following erspersed organic matter, a and often with a dominance of ecies may also be present). The tural Areas and Preserves can	Wetland is a Category 3 wetland. Go to Question 11	Go to Question 11
11	or all of the specie Plains (Madison a Marion Counties), portions of wester etc.).	es. Is the wetland a relict wet prairie is in Table 1. Extensive prairies were nd Union Counties), Sandusky Plains northwest Ohio (e.g. Erie, Huron, Lun Ohio Counties (e.g. Darke, Mercer	e formerly located in the Darby s (Wyandot, Crawford, and ucas, Wood Counties), and	Wetland should be evaluated for possible Category 3 status. Complete Quantitative Rating.	Complete Quantitative Rating.
	. Characteristic pl	•	<del> </del>		<del> </del>
Lythrum Myrioph Najas mi Phalaris Phragmi Potamog Ranuncu Rhamnus	arundinacea tes australis eton crispus lus ficaria s frangula agustifolia	fen species  Zvzadenus elezans var. glaucus Cacalia plantaginea Carex flava Carex sterilis Caex stricta Deschampsia caespitosa Eleocharis rostellata Eriophorum viridicarinatum Gentianopsis spn. Lobelia kalmii Parnassia glauca Potentilla fruticosa Rhamnus alnifolia Rhynchospora capillacea Salix candida Salix nerissima Solidago ohioensis Tofieldia glutinosa Triglochin maritimum	bog species  Calla palustris Carex atlantica var. capillacea Carex oligosperma Carex trisperma Chamaedaphne calyculata Decodon verticillatus Eriophorum virginicum Larix laricina Nemopanthus mucronatus Schechzeria palustris Sphagnum spp. Vaccinium macrocarpon Vaccinium corymbosum Vaccinium oxycoccos Woodwardia virginica Xyris difformis	Oak Opening species  Carex Carvytolepis  Carex lasiocarpa  Carex stricta  Cladium mariscoides  Calamagrostis stricta  Calamagrostis canaden:  Quercus palustris	Calamagrostis Calamogrostis stricta Carex atherodes Carex buxbaumii Carex pellita

		Form Quantitative R		Facilia Name I	ta da accidado			D-1 0/00/0	0
Site:	Laurel La	ikes K	ater(s):	Emily Nagle, L		ovijevic		<b>Date:</b>   6/30/2	2
1	1			Wetland	: W-V				
subtotal	max6pts	Metric 1. Wetlan Select one size class and as		size).				37	Mod 2
		> 50 acres (<20.2	ha) (6 pts)					Final Score	Category
	1	25 to <50 acres (1 10 to <25 acres (4							Category
	<u> </u>	3 to 10 <acres (1.2<="" td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></acres>							
		0.3 to <3 acres (0							
		1 0.1 to <0.3 acres		a) (1 pt)					
8	7	Metric 2. Upland		and surrour	nding land	l use.			
subtotal	max14pts	2a. Calculate average buff			_				
	4		-	ft) or more around w					
	4			o <50m (82 to <164 ft) to <25m (32 ft to <82					
				ge <10m (<32ft) aroun					
		2b. Intensity of surrounding	-	elect one or double of forest, prairie, savanr		-			
	3			bland, young second		(- )			
				al, fenced pasture, par sture, row cropping, m			eld. (3)		
24	16	Metric 3. Hydrol		stare, row cropping, n	illing, construction	11. (1)			
subtotal	max30pts	3a. Sources of water. Scor		y.	31	b. Connectivity.	Score all t	that apply.	
		High pH groundwa					ar floodplair		
	4	Other groundwate  1 Precipitation (1)	er (3)		3	<del></del>		ike and other human us land (e.g. forest), comp	` '
		3 Seasonal/Intermitt	tent surface wat	er (3)				upland corridor (1)	. ( )
		Perennial surface 3c. Maximum water depth.				-		ration. Score one of tly inundated/saturated	
		>0.7 (27.6in) (3)	Coloot only of	no and abbigit book	·	<del></del>		ed/saturated (3)	(4)
	1	04. to 0.7m (15.7 to 0.4m (<15.7in) (1			3		nally inunda	* *	
		1 >0.4m (<15.7in) (1 3e. Modifications to natural		gime. Score one or	double check a		ially satural	ted in upper 30 cm (1)	
		None or none app	parent (12)		1 . II P. ( 1				
	5	7 Recovered (7) 3 Recovering (3)		Cnec	k all disturbance ditch	es observed	point sou	rce (non stormwater)	
		Recent or no reco	overy (1)		tile		filling/gra		
					dike weir		dirt road dredging		
					stormwater inp	out 🗌	other - cu	ılvert	
33	9	Metric 4. Habitat alto	oration an	d development					
subtotal	max20pts	4a. Substrate disturbance.				c. Habitat alterat	ion. Score	e one or dbl check a	nd average.
	2.5	None or none app Recovered (3)	parent (4)		25	<del></del>		arent (9)	
	2.5	3 Recovered (3) 2 Recovering (2)			3.5	<del></del>	ered (6) ering (3)		
		Recent or no reco				1 Recent	or no reco	very (1)	
		4b. Habitat development. S Excellent (7)	Select only one	e and assign score.					
		Very good (6)			k all disturbance	es observed			
	3	Good (5)  Moderately good (	(4)		mowing grazing			oling removal ous/aquatic bed remova	al
		3 Fair (3)	(4)		clearcutting		sediment		
		Poor to fair (2)			selective cuttin	• =	dredging		
		Poor (1)			woody debris r toxic pollutants	=	farming nutrient e	nrichment	
	33				-				
	SS								

last revised 1 February 2001 jjm

	Laurel L	akes	Rater(s):	Emily Nagle, L	indsey J	lakovljevic I	Date:	6/30/22
	_L			Wetland		,		
	33				1			
_								
Si	ubtotal1st page							
3	0	Matria E. Creatial	Watlanda					
al	0 max10pts	Metric 5. Special Check all that apply and		ad				
aı	пахторіѕ	Bog (10)	score as mulcan	au.				
		Fen (10)						
		Old growth for	est (10)					
		Mature foreste						
	0			nd-unrestricted hydrolog	gy (10)			
		Lake Erie Coa	stal/tributary wetla	nd-restricted hydrology	(5)			
		Lake Plain Sa	nd Prairies (Oak O	penings) (10)				
		Relict Wet Pra	iries (10)					
		Known occurr	ence state/federal	threatened or endanger	ed species (	10)		
				ater fowl habitat or usage				
		Category 1 W	etland. See questi	on 1 Qualitative Rating	- 10			
7	4	Metric 6. Plant co	ommunities,	interspersion,	microto <sub>l</sub>	oography.		
al	max20pts	<ol><li>6a. Wetland Vegetation</li></ol>	Communities		Vegetation	on Community Cover Scale		
		Score all present using (	to 3 scale.		0	Absent or comprises <0.1ha (0.24	171 acres)	contiguous area
		Aquatic bed				Preset and either commprises sm	all part of	wetland's
		0 Emergent				vegetation and is of moderate qu		omprises a
	1	Shrub			1	significant part but is of low quality		
		1 Forest				Present and either comprises sign		
		Mudflats			•	vegetation and is of moderate qu	uality or co	mprises a small
		Open water			2	part and is of hgh quality.		
						B		
		Other	v) interenersion			Present and comprises significant	t part or m	ore of wetland's
		Other 6b. Horizontal (plan view	v) interspersion.		3 Narrative	vegetation and is of high quality.		ore of wetland's
		Other 6b. Horizontal (plan view Select only one.	v) interspersion.			vegetation and is of high quality.  Description of Vegetation Quality	ty	
		Other 6b. Horizontal (plan view Select only one.  High (5)			Narrative	vegetation and is of high quality.  Description of Vegetation Quality  Low spp diversity and/or predomin	ty nance of n	
	2	Other 6b. Horizontal (plan view Select only one.  High (5)  Moderately high				vegetation and is of high quality.  Description of Vegetation Quality  Low spp diversity and/or predomin  disturbance tolerant native speci	ty nance of n	onnative or
	2	Other 6b. Horizontal (plan view Select only one.  High (5)	gh (4)		Narrative	vegetation and is of high quality.  Description of Vegetation Quality  Low spp diversity and/or predomin	nance of n ies ent of the	onnative or vegetation,
	2	Other  6b. Horizontal (plan view Select only one.  High (5)  Moderately high Moderate (3)	gh (4)		Narrative	vegetation and is of high quality.  Description of Vegetation Quality  Low spp diversity and/or predomin  disturbance tolerant native speci  Native spp are dominant componer	nance of n ies ent of the v	onnative or regetation, rrant native spp
	2	Other 6b. Horizontal (plan view Select only one.  High (5)  Moderately high Moderate (3)  2 Moderately low	gh (4)		Narrative	vegetation and is of high quality.  Description of Vegetation Quality  Low spp diversity and/or predomin  disturbance tolerant native speci  Native spp are dominant compone  although nonnative and/or distru	nance of name of the sent of t	onnative or vegetation, orant native spp moderate to
	2	Other 6b. Horizontal (plan view Select only one.  High (5) Moderately high Moderate (3) 2 Moderately low Low (1)	yh (4) v (2)	o Table 1 ORAM	Narrative	vegetation and is of high quality.  Description of Vegetation Quality  Low spp diversity and/or predomin disturbance tolerant native speci  Native spp are dominant compone although nonnative and/or distru can also be present, and species	nance of name of the sent of t	onnative or vegetation, orant native spp moderate to
	2	Other 6b. Horizontal (plan view Select only one.  High (5) Moderately high Moderate (3) 2 Moderately low Low (1) None (o)	yh (4) v (2) e plants. Refer t		Narrative	vegetation and is of high quality.  Description of Vegetation Quality.  Low spp diversity and/or predomin disturbance tolerant native specient Native spp are dominant component although nonnative and/or distructor can also be present, and species moderately high, but generally we	nance of nance of nance of the sent of the	onnative or vegetation, erant native spp moderate to be of rare,
	2	Other 6b. Horizontal (plan view Select only one.  High (5) Moderately high Moderate (3) 2 Moderately low Low (1) None (o) 6c. Coverage of invasiv	y (2) e plants. Refer t		Narrative	vegetation and is of high quality.  Description of Vegetation Quality  Low spp diversity and/or predoming disturbance tolerant native specients and species although nonnative and/or distrucan also be present, and species moderately high, but generally we threatened or endangered spp.	nance of nance of nance of the sent of the sence toles diversity //o presences, with non	onnative or vegetation, erant native spp moderate to be of rare, ative spp
		Other  6b. Horizontal (plan view Select only one.  High (5)  Moderately high Moderate (3)  2 Moderately low Low (1)  None (0)  6c. Coverage of invasive long form for list. A  Extensive >75  Moderate 25-7	e plants. Refer odd or deduct policy cover (-5)		Narrative	vegetation and is of high quality.  Description of Vegetation Quality  Low spp diversity and/or predoming disturbance tolerant native species. Native spp are dominant compone although nonnative and/or distructor can also be present, and species moderately high, but generally we threatened or endangered spp.  A predominance of native species and/or disturbance tolerant native absent, and high spp diversity and the predominance of species.	nance of n ies ent of the v bance tole s diversity /o presences, with non e spp apb nd often, b	onnative or vegetation, orant native spp moderate to se of rare, ative spp sent or virtually ut not always,
	2 0	Other 6b. Horizontal (plan view Select only one.  High (5) Moderately high Moderately low Low (1) None (0) 6c. Coverage of invasiv long form for list. A  Extensive >75 Moderate 25-7 Sparse 5-25%	e plants. Refer t dd or deduct poi % cover (-5) 5% cover (-3) cover (-1)		low mod	vegetation and is of high quality.  Description of Vegetation Quality  Low spp diversity and/or predoming disturbance tolerant native species.  Native spp are dominant compone although nonnative and/or distructor can also be present, and species moderately high, but generally with the attended or endangered spp.  A predominance of native species and/or disturbance tolerant native absent, and high spp diversity at the presence of rare, threatened.	nance of n ies ent of the v bance tole s diversity /o presences, with non e spp apb nd often, b	onnative or vegetation, orant native spp moderate to be of rare, ative spp sent or virtually ut not always,
		Other 6b. Horizontal (plan view Select only one.  High (5)  Moderately high Moderately low Low (1)  None (0) 6c. Coverage of invasive long form for list. A  Extensive >75  Moderate 25-1  Sparse 5-25% Nearly absent	e plants. Refer odd or deduct policy cover (-5)		low  mod  high  Mudflat a	vegetation and is of high quality.  Description of Vegetation Quality  Low spp diversity and/or predoming disturbance tolerant native species. Native spp are dominant compone although nonnative and/or distructor can also be present, and species moderately high, but generally with the attended or endangered spp.  A predominance of native species and/or disturbance tolerant native absent, and high spp diversity are the presence of rare, threatened and Open Water Class Quality	nance of n ies ent of the v bance tole s diversity /o presences, with non e spp apb nd often, b	onnative or vegetation, orant native spp moderate to be of rare, ative spp sent or virtually ut not always,
		Other 6b. Horizontal (plan view Select only one.  High (5) Moderately high Moderately low Low (1) None (0) 6c. Coverage of invasiv long form for list. A  Extensive >75 Moderate 25-7 Sparse 5-25%	e plants. Refer t dd or deduct poi % cover (-5) 5% cover (-3) cover (-1)		low mod	vegetation and is of high quality.  Description of Vegetation Quality  Low spp diversity and/or predoming disturbance tolerant native species.  Native spp are dominant compone although nonnative and/or distructor can also be present, and species moderately high, but generally with the attended or endangered spp.  A predominance of native species and/or disturbance tolerant native absent, and high spp diversity at the presence of rare, threatened.	ty nance of n ies ent of the v bance tole s diversity /o presence s, with non e spp apb nd often, b or endang	onnative or vegetation, orant native spp moderate to se of rare, ative spp sent or virtually ut not always,

37.0 GRAND TOTAL (max 100 pts)

Vegetated hummocks/tussocks

Coarse woody debris > 15cm (6in) Standing dead >25cm (10in) dbh Amphibian breeding pools

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories at the following address: http://www.epa.state.oh.us/dsw/401/401.html last revised 1 February 2001 jjm

Comments:

End of Quantitative Rating. Complete Categorization Worksheets.

High 4ha (9.88 acres) or more

amounts of highest quality

Present very small amounts or if more common of marginal quality

Present in moderate amounts, but not of highest quality or in small

Present in moderate or greater amounts and of highest quality

Microtopography Cover Scale

### **ORAM Summary Worksheet**

		YES	NO	Result
Narrative Rating	Question 1 Critical Habitat		<b>V</b>	If yes, Category 3.
	Question 2. Threatened or Endangered Species		<b>V</b>	If yes, Category 3.
	Question 3. High Quality Natural Wetland		<b>V</b>	If yes, Category 3.
	Question 4. Significant bird habitat		<b>V</b>	If yes, Category 3.
	Question 5. Category 1 Wetlands		<b>V</b>	If yes, Category 1.
	Question 6. Bogs		<b>V</b>	If yes, Category 3.
	Question 7. Fens		<b>V</b>	If yes, Category 3.
	Question 8a. Old Growth Forest		7	If yes, Category 3.
	Question 8b. Mature Forested Wetland		7	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted		7	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with		<b>V</b>	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants		7	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings		<b>V</b>	If yes, Category 3
	Question 11. Relict Wet Prairies		7	
Quantitative Rating	Metric 1. Size	1		
	Metric 2. Buffers and surrounding land use	7		
	Metric 3. Hydrology	16		
	Metric 4. Habitat	9		
	Metric 5. Special Wetland Communities	0		
	Metric 6. Plant communities, interspersion, microtopography	4		
	TOTAL SCORE	37		Category based on score breakpoints

**Complete Wetland Categorization Worksheet.** 

### **Wetland Categorization Worksheet**

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

Final Category

Modified CAT 2

**End of Ohio Rapid Assessment Method for Wetlands.** 

hio	Primary Headwater Habitat Field Evaluation Form  HHEI Score (sum of metrics 1+2+3)	<b>24</b>
DATE <u>06-23-2</u> OTE: Complete Al	S RIVER BASIN MAD Brook RIVER CODE ON ILLUDIA DRAINAGE AREA (MF) ON REACH (N) 340.6 LAT 41.242954° LONG -81.4674729° RIVER MILE 2 SCORER EBN, LJ COMMENTS	truction
1. SUBSTRATE (Max of 32).  TYPE BLDR SL BOULDER COBBLE GRAVEL SAND (<	MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO  E (Estimate percent of every type present). Check ONLY (wo predominant substrate TYPE boxes.  Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B  PERCENT TYPE  ABS [16 pts] SLT [3 pt] PERCENT  R (>256 mm) [16 pts] LEAF PACKWOODY DEBRIS [3 pts] 502.  EX [16 pts] PRICED RECOVERING RECOVERING RECENT OR NO  WIND PRODUCT OF THE CONTROL OF THE CO	HHEI Metri-Points Substra Max = 4
2. Maximum P time of evalu > 30 centimet > 22.5 - 30 centimet > 10 - 22.5 centimet	TOTAL NUMBER OF SUBSTRATE TYPES: O TOTAL NUMBER OF	Pool Deg Max = 3
> 4.0 meters > 3.0 m - 4.0		Width Max=3
L R W  Mo  V Na  COMI  FLOV  Stream  Subsu	This Information mustals o be completed  ARIAN ZONE AND FLOODPLAIN QUALITY * NOTE: River Left (L) and Right (R) as looking downstream*  PARIAN WIDTH  (Per Bank)  L R  Mature Forest, Wetland  Immature Forest, Wetland  Immature Forest, Shrub or Old Field  Immature Forest,	Fores
0.5	1.5	00 ty

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

QHEI PERFORMED? Yes No QHEI Score	
DOWNSTREAM DESIGNATED USE(S)	Distance from Evaluated Stream 0.15
DI WITH Name: Brandwine Creek	Dietance from Evaluated Stream
CWH Name:	
ACCUSED OF MARK MICH LIDING THE	ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION.
LILACO	NRCS Soil Map Succinio
USGS Quadrangle Name: HUUSOII	Hudson
County: Summit To	ownship/City: 1100~2011
MISCELLANEOUS	
Base Flow Conditions? (Y/N) Date of last precipitation	n: Quantity:
Photo-documentation Notes:	
Elevated Turbidity?(Y/N): Canopy (% open):	<u>357.</u>
Mars as males collected for water chemistry? (YN):	Lab Sample # or ID (attach results):
- 1884 - 1885 - 1885 - 1885 - 1885 - 1885 - 1885 - 1885 - 1885 - 1885 - 1885 - 1885 - 1885 - 1885 - 1885 - 1885	Conductivity (difficulty)
Field Measures:Temp (°C) Dissolved Uxygen (mg/l)	
is the sampling reach representative of the stream (Y/N)	If not, explain:
Additional comments/description of pollution impacts:	
BIOLOGICALO	OBSERVATIONS
BIOLOGICAL C	DBSERVATIONS servations below)
BIOLOGICAL C (Record all obs	OBSERVATIONS servations below)
Fish Observed? (Y/N) Species observed (if known):  The class observed (W/N) Species observed	DBSERVATIONS servations below)  I (if known):
Fish Observed? (Y/N) Species observed (if known):_ Frogs or Tadpoles Observed? (Y/N) Species observed (if known):_	OBSERVATIONS Servations below)  I (if known):
Fish Observed? (Y/N) Species observed (if known):_ Frogs or Tadpoles Observed? (Y/N) Species observed (if known):_	OBSERVATIONS Servations below)  I (if known):
Fish Observed? (Y/N) Species observed (if known):_ Frogs or Tadpoles Observed? (Y/N) Species observed Salamanders Observed? (Y/N) Species observed (if known):_ Aquatic Macroinvertebrates Observed? (Y/N) Species of	OBSERVATIONS servations below)  I (if known): observed (if known):
Fish Observed? (Y/N) Species observed (if known):_ Frogs or Tadpoles Observed? (Y/N) Species observed (if known):_	OBSERVATIONS servations below)  I (if known): observed (if known):
Fish Observed? (Y/N) Species observed (if known) Frogs or Tadpoles Observed? (Y/N) Species observed Salamanders Observed? (Y/N) Species observed (if known) Aquatic Macroinvertebrates Observed? (Y/N) Species of Comments Regarding Biology:	OBSERVATIONS servations below)  I (if known): Observed (if known):
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Fish Observed? (Y/N) Species observed (if known):  Frogs or Tadpoles Observed? (Y/N) Species observed  Salamanders Observed? (Y/N) Species observed (if known)  Aquatic Macroinvertebrates Observed? (Y/N) Species observed  Comments Regarding Biology:  DRAWING AND NARRATIVE DESCRIPT	OBSERVATIONS servations below)  I (if known): Observed (if known):
BIOLOGICAL C (Record all observed? (Y/N) Species observed (if known): Frogs or Tadpoles Observed? (Y/N) Species observed Salamanders Observed? (Y/N) Species observed (if known) Aquatic Macroinvertebrates Observed? (Y/N) Species of Comments Regarding Biology:  DRAWING AND NARRATIVE DESCRIPT Include important landmarks and other features of inter-  (Folf Putling Yol)	DBSERVATIONS servations below)  I (if known): Deserved (if known): Disserved (if known):  TION OF STREAM REACH (This must be completed) Test for site evaluation and a narrative description of the stream's location
BIOLOGICAL C (Record all observed? (Y/N) Species observed (if known): Frogs or Tadpoles Observed? (Y/N) Species observed Salamanders Observed? (Y/N) Species observed (if known) Aquatic Macroinvertebrates Observed? (Y/N) Species of Comments Regarding Biology:  DRAWING AND NARRATIVE DESCRIPT Include important landmarks and other features of inter-  (Folf Putling Yol)	DBSERVATIONS servations below)  I (if known): Deserved (if known):  TION OF STREAM REACH (This must be completed) rest for site evaluation and a narrative description of the stream's location
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Fish Observed? (Y/N) Species observed (if known):  Frogs or Tadpoles Observed? (Y/N) Species observed  Salamanders Observed? (Y/N) Species observed (if known):  Aquatic Macroinvertebrates Observed? (Y/N) N Species of Comments Regarding Biology:  DRAWING AND NARRATIVE DESCRIPT Include important landmarks and other features of interference of the colf putting your color of the	DBSERVATIONS servations below)  I (if known): Described (if known):  TION OF STREAM REACH (This must be completed) rest for site evaluation and a narrative description of the stream's location  emergent veg.
BIOLOGICAL C (Record all obs Fish Observed? (Y/N) Species observed (if known): Frogs or Tadpoles Observed? (Y/N) Species observed Salamanders Observed? (Y/N) Species observed (if known) Aquatic Macroinvertebrates Observed? (Y/N) N Species of Comments Regarding Biology:  DRAWING AND NARRATIVE DESCRIPT Include important landmarks and other features of inter (Folf Puthing Yol)	DBSERVATIONS Servations below)  I (if known): Deserved (if known): Deserved (if known):  TION OF STREAM REACH (This must be completed)  rest for site evaluation and a narrative description of the stream's location  emergent veg.  Way  Deserved  Cith Marrative Marrat
Fish Observed? (Y/N) Species observed (if known):  Frogs or Tadpoles Observed? (Y/N) Species observed  Salamanders Observed? (Y/N) Species observed (if known):  Aquatic Macroinvertebrates Observed? (Y/N) N Species of Comments Regarding Biology:  DRAWING AND NARRATIVE DESCRIPT Include important landmarks and other features of interference of the colf putting your color of the	DBSERVATIONS servations below)  I (if known): Deserved (if known): Disserved (if known):
Fish Observed? (Y/N) Species observed (if known):_ Frogs or Tadpoles Observed? (Y/N) Species observed Salamanders Observed? (Y/N) Species observed (if known):_ Aquatic Macroinvertebrates Observed? (Y/N) Species of Comments Regarding Biology:  DRAWING AND NARRATIVE DESCRIPT Include important landmarks and other features of inter  Golf Puthing Yold  Leaf Pochs	DBSERVATIONS Servations below)  I (if known): Deserved (if known): Deserved (if known):  TION OF STREAM REACH (This must be completed)  rest for site evaluation and a narrative description of the stream's location  emergent veg.  Way  Deserved  Cith Marrative Marrat
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BIOLOGICAL C (Record all obs Fish Observed? (Y/N) Species observed (if known): Frogs or Tadpoles Observed? (Y/N) Species observed Salamanders Observed? (Y/N) Species observed (if known) Aquatic Macroinvertebrates Observed? (Y/N) N Species of Comments Regarding Biology:  DRAWING AND NARRATIVE DESCRIPT Include important landmarks and other features of inter (Folf Puthing Yol)	DBSERVATIONS Servations below)  I (if known): Deserved (if known): Deserved (if known):  TION OF STREAM REACH (This must be completed)  rest for site evaluation and a narrative description of the stream's location  emergent veg.  Way  Deserved  Cith Marrative Marrat



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

SITE NAME/LOCATION Laurel Lakes in Hudson Ohio	
SITE NUMBER S-6 RIVER BASIN DRAINAGE AREA (mi²)	<0.10
LENGTH OF STREAM REACH (ft) $54$ Lat. $41.245472$ Long. $-81.473573$ River code River Mile	
DATE 8/16/2022 SCORER LNJ, EN ■ COMMENTS	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Inst	
STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERING RECOVER	COVERY
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.	ı HHEI
TYPE PERCENT TYPE PERCENT	Metri
■       BLDR SLABS [16 pts]       0%       SILT [3 pt]       40%         ■       BOULDER (>256 mm) [16 pts]       0%       LEAF PACK/WOODY DEBRIS [3 pts]       50%	
BEDROCK [16 pt]	Substrat Max = 4
COBBLE (65-256 mm) [12 pts]	
SAND (<2 mm) [6 pts]	9
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B) Check	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 6 TOTAL NUMBER OF SUBSTRATE TYPES: 3	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Dep
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]	Max = 3
> 22.5 - 30 cm [30 pts]	5
COMMENTS MAXIMUM POOL DEPTH (centimeters):	
<ol> <li>BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):</li> </ol>	5
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	Bankful Width
	Width
> 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]	Max=30
> 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]	Width
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]  COMMENTS  AVERAGE BANKFULL WIDTH (meters):  This information must also be completed	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]  COMMENTS  AVERAGE BANKFULL WIDTH (meters):  0.60	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]  COMMENTS  This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  ANOTE: River Left (L) and Right (R) as looking downstream ☆  RIPARIAN WIDTH  L R (Per Bank)  L R (Most Predominant per Bank)  L R	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]  COMMENTS  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)  Wide >10m  Moderate 5-10m  Moderate 5-10m  Noderate 5-10m	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]  COMMENTS  This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  ANOTE: River Left (L) and Right (R) as looking downstream ↑  RIPARIAN WIDTH  L R (Per Bank)  Wide >10m  Mature Forest, Wetland  Moderate 5-10m  NOTE: River Left (L) and Right (R) as looking downstream ↑  RIPARIAN WIDTH  L R (Per Bank)  Wide >10m  Mature Forest, Wetland  Conservation Tillage  Immature Forest, Shrub or Old  Field  Conservation Field	Width Max=30
> 4.0 meters (> 13') [30 pts]   > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]   > 1.0 m (<=3' 3") [5 pts]   > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts]     > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]     > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]     COMMENTS	Width Max=30
> 4.0 meters (> 13') [30 pts]	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]  COMMENTS  This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  RIPARIAN WIDTH  FLOODPLAIN QUALITY  Wide > 10 m  Mature Forest, Wetland  Moderate 5-10m  Moderate 5-10m  None  COMMENTS  Fenced Pasture  FLOW REGIME (At Time of Evaluation)  Stream Flowing  Subsurface flow with isolated pools (Interstitial)  > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]  > 1.0 m (<=3' 3") [5 pts]    2	Width Max=30
> 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]  > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]  COMMENTS  This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  ANOTE: River Left (L) and Right (R) as looking downstream And RIPARIAN WIDTH  FLOODPLAIN QUALITY  RIPARIAN WIDTH  FLOODPLAIN QUALITY  Wide >10 m  Mature Forest, Wetland  Moderate 5-10m  Mature Forest, Wetland  Moderate 5-10m  Residential, Park, New Field  None  COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing  Subsurface flow with isolated pools (Interstitial)  COMMENTS  Moist Channel, isolated pools, no flow (Intermitten Dry channel, no water (Ephemeral))	Width Max=30
> 4.0 meters (> 13') [30 pts]   > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]   > 1.0 m (<=3' 3") [5 pts]   > 1.0	Width Max=30
> 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" - 13') [25 pts]  > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]  COMMENTS  This information must also be completed  RIPARIAN ZONE AND FLOODPLAIN QUALITY  **RIPARIAN WIDTH  FLOODPLAIN QUALITY  L R (Per Bank)  Wide >10m  Mature Forest, Wetland  Moderate 5-10m  Moderate 5-10m  RIPARIAN WIDTH  FLOODPLAIN QUALITY  RIPARIAN WIDTH  FLOODPLAIN QUALITY  RIPARIAN WIDTH  FLOODPLAIN QUALITY  RESIDENT FLOOPPLAIN QUALITY  RESIDENT FOREST, Wetland  Conservation Tillage  This information must also be completed  RIPARIAN WIDTH  FLOODPLAIN QUALITY  RESIDENT FLOOPPLAIN QUALITY  RESIDENT FLOOPPLAIN QUALITY  RESIDENT FOREST, Wetland  Conservation Tillage  Wide >10m  Wide >10m  Mature Forest, Shrub or Old  Field  Per Pasture, Row C  Open Pasture, Row C  Open Pasture, Row C  Mining or Construction  COMMENTS  FLOW REGIME (At Time of Evaluation) (Check ONLY one box):  Stream Flowing  Subsurface flow with isolated pools (Interstitial)  COMMENTS  SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):  None  O.5  1.0  3.0  3.0  3.0  3.0  3.0  3.0  3.0	Width Max=30
> 4.0 meters (> 13') [30 pts]   > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]   > 1.0 m (<=3' 3") [5 pts]   > 1.0	Width Max=30  5

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes V No QHEI Score (If Yes, Attach Completed QHEI Form)	
DOWNSTREAM DESIGNATED USE(S)	
WWH Name: Brandywine Creek	_ Distance from Evaluated Stream 0.15
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: Hudson	NRCS Soil Map Page: NRCS Soil Map Stream Order
County: Summit Town:	ship / City:Hudson
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00	
Photograph Information:	
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:	
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	
Comments Regarding Biology:	

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):

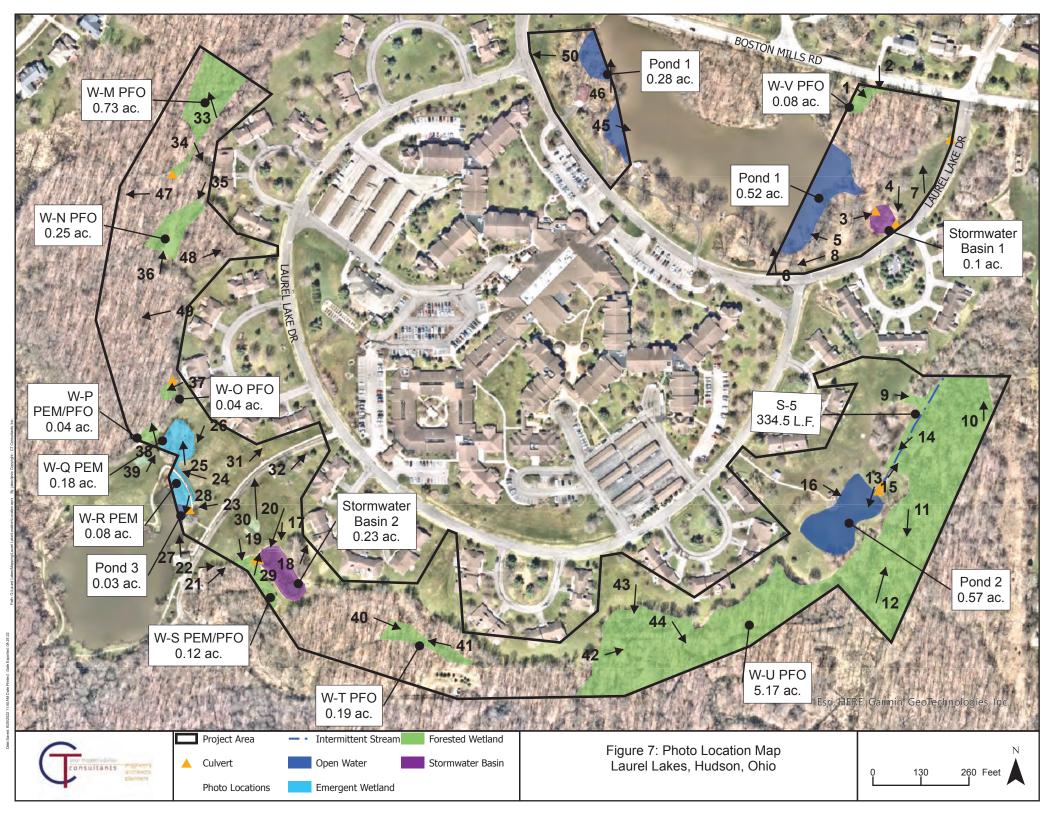
Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location





Appendix D

Site Photographs





**DESCRIPTION** 

View of Wetland V

**DIRECTION** 

East

**DATE** 

06/24/2022



### PHOTOGRAPH 2

**DESCRIPTION** 

View of Wetland V

**DIRECTION** 

South

<u>DATE</u>





#### **DESCRIPTION**

View of Stormwater Basin 1

**DIRECTION** 

East

**DATE** 

06/24/2022



### PHOTOGRAPH 4

#### **DESCRIPTION**

View of Stormwater Basin 1

**DIRECTION** 

South

**DATE** 





**DESCRIPTION** 

Open Water

**DIRECTION** 

West

**DATE** 

06/24/2022



## PHOTOGRAPH 6

**DESCRIPTION** 

Open Water

**DIRECTION** 

Northwest

**DATE** 





**DESCRIPTION** 

Upland

**DIRECTION** 

North

**DATE** 

06/24/2022



## PHOTOGRAPH 8

**DESCRIPTION** 

Upland

**DIRECTION** 

West

<u>DATE</u>





**DESCRIPTION** 

View of Wetland U

**DIRECTION** 

East

**DATE** 

06/24/2022



## PHOTOGRAPH 10

**DESCRIPTION** 

View of Wetland U

**DIRECTION** 

North

<u>DATE</u>





**DESCRIPTION** 

View of Wetland U

**DIRECTION** 

South

**DATE** 

06/24/2022



## PHOTOGRAPH 12

**DESCRIPTION** 

View of Wetland U

**DIRECTION** 

North

**DATE** 





**DESCRIPTION** 

S-5

**DIRECTION** 

North

**DATE** 

06/24/2022



## PHOTOGRAPH 14

**DESCRIPTION** 

S-5

**DIRECTION** 

South

**DATE** 





**DESCRIPTION** 

Open Water

**DIRECTION** 

South

**DATE** 

06/24/2022



## PHOTOGRAPH 16

**DESCRIPTION** 

Open Water

**DIRECTION** 

East

**DATE** 





**DESCRIPTION** 

Upland

**DIRECTION** 

Southeast

**DATE** 

06/24/2022



## PHOTOGRAPH 18

**DESCRIPTION** 

Upland

**DIRECTION** 

Northeast

**DATE** 





#### **DESCRIPTION**

View of Stormwater Basin 2

**DIRECTION** 

Southwest

**DATE** 

06/24/2022



#### PHOTOGRAPH 20

#### **DESCRIPTION**

View of Stormwater Basin 2

**DIRECTION** 

Southeast

**DATE** 





**DESCRIPTION** 

View of Wetland S

**DIRECTION** 

Northeast

**DATE** 

06/24/2022



# PHOTOGRAPH 22

**DESCRIPTION** 

View of Wetland S

**DIRECTION** 

East

**DATE** 





**DESCRIPTION** 

View of Wetland R

**DIRECTION** 

West

**DATE** 

06/24/2022



#### PHOTOGRAPH 24

**DESCRIPTION** 

View of Wetland R and Wetland Q

**DIRECTION** 

Northwest

**DATE** 





**DESCRIPTION** 

View of Wetland Q

**DIRECTION** 

North

**DATE** 

06/24/2022



#### PHOTOGRAPH 26

**DESCRIPTION** 

View of Wetland Q

**DIRECTION** 

Southwest

**DATE** 





**DESCRIPTION** 

Open Water

**DIRECTION** 

North

**DATE** 

06/24/2022



# PHOTOGRAPH 28

**DESCRIPTION** 

Open Water

**DIRECTION** 

South

<u>DATE</u>





#### **DESCRIPTION**

View of Stormwater Basin 2

**DIRECTION** 

South

**DATE** 

06/24/2022



#### PHOTOGRAPH 30

**DESCRIPTION** 

Upland

**DIRECTION** 

North

**DATE** 





**DESCRIPTION** 

Upland

**DIRECTION** 

Northeast

**DATE** 

06/24/2022



# PHOTOGRAPH 32

**DESCRIPTION** 

Upland

**DIRECTION** 

Northeast

**DATE** 





**DESCRIPTION** 

Wetland M

**DIRECTION** 

North

**DATE** 

08/16/2022



#### PHOTOGRAPH 34

**DESCRIPTION** 

Wetland M

**DIRECTION** 

Southeast

**DATE** 





**DESCRIPTION** 

Wetland N

**DIRECTION** 

South

**DATE** 

08/16/2022



#### PHOTOGRAPH 36

**DESCRIPTION** 

Wetland N

**DIRECTION** 

North

<u>DATE</u>





**DESCRIPTION** 

Wetland O

**DIRECTION** 

West

**DATE** 

08/16/2022



#### PHOTOGRAPH 38

**DESCRIPTION** 

Wetland P

**DIRECTION** 

North

**DATE** 





**DESCRIPTION** 

Wetland P

**DIRECTION** 

East

**DATE** 

08/16/2022



#### PHOTOGRAPH 40

**DESCRIPTION** 

Wetland T

**DIRECTION** 

East

<u>DATE</u>





**DESCRIPTION** 

Wetland T

**DIRECTION** 

West

**DATE** 

08/16/2022



#### PHOTOGRAPH 42

**DESCRIPTION** 

Wetland U

**DIRECTION** 

East

**DATE** 





**DESCRIPTION** 

Wetland U

**DIRECTION** 

South

**DATE** 

08/16/2022



#### PHOTOGRAPH 44

**DESCRIPTION** 

Wetland U

**DIRECTION** 

Southeast

**DATE** 





**DESCRIPTION** 

Pond 1

**DIRECTION** 

East

DATE

08/16/2022



#### PHOTOGRAPH 46

**DESCRIPTION** 

Pond 1

**DIRECTION** 

North

**DATE** 





**DESCRIPTION** 

Upland

**DIRECTION** 

West

**DATE** 

08/16/2022



#### PHOTOGRAPH 48

**DESCRIPTION** 

Upland

**DIRECTION** 

East

<u>DATE</u>





**DESCRIPTION** 

Upland

**DIRECTION** 

West

**DATE** 

08/16/2022



#### PHOTOGRAPH 50

**DESCRIPTION** 

Upland

**DIRECTION** 

West

<u>DATE</u>

