WETLAND DELINEATION

APPROXIMATELY 81 ACRES NORTH OF WEST STREETSBORO STREET CITY OF HUDSON, SUMMIT COUNTY, OHIO

July 2023

Prepared for:

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WETLAND DELINEATION

Approximately 81 Acres North of West Streetsboro Street City of Hudson, Summit County, Ohio (H23163-03)

1.0 INTRODUCTION

On May 15, 17, and 18, 2023, HZW Environmental Consultants, LLC (HZW) conducted a wetland delineation of approximately 81 acres north of West Streetsboro Street encompassing 20 parcels in the city of Hudson, Summit County, Ohio (herein referred to as the "Study Area"). The 20 parcels comprising the Study Area include 3004604, 3005112, 3009782, -83, -84, -85, -86, -87, -88, -89, -90, -91, -92, -93, -94, -95, -96, -97, -98, -99. This study was conducted in accordance with HZW's agreement with GVI, LLC (herein referred to as the "Client").

1.1 Purpose

The primary purpose of this wetland delineation was to identify areas within the boundaries of the Study Area that meet the three (3) criteria of a wetland: hydrophytic vegetation, hydric soils and wetland hydrology and any other areas (streams, ponds, etc.) that are considered "waters of the United States" and "waters of the State of Ohio."

1.2 Methods of Investigation

All investigative methods and field procedures were performed in accordance with the guidelines established in the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0) (ERDC/EL TR-12-1; January 2012) and the 1987 Army Corps of Engineers (Corps) Manual, Technical Report Y-87-1, <u>Field Guide for Wetland Delineation (1987 Manual</u>). As required by the 1987 Manual, available reference materials were reviewed for the Study Area. These references included, but were not limited to, the 2021 Hudson, Ohio, National Wetlands Inventory (NWI) map published online by the United States Fish and Wildlife Service; the 2023 Wadsworth and West Richfield, Ohio, United States Geological Survey (USGS) 7.5 Minute Topographic Quadrangle Maps; the Web Soil Survey of Summit County, Ohio (Soil Survey) issued in 2023 by the United States Department of Agriculture (USDA); and a list of hydric soils published by the Natural Resource Conservation Service (NRCS) for Summit County.

The site investigation methods followed the "Areas Greater than 5 Acres in Size," as described in Section D - Subsection 2 of the <u>1987 Manual</u>. As a new plant community or change in hydrology was observed, a data point was established (designated "DPI" through "DPI7"). At each data point, field conditions were evaluated and recorded to determine the presence or absence of hydrophytic vegetation, hydric soil conditions, and wetland hydrology. In addition, a photographic log was prepared for the Study Area during the site investigation activities. At any data point exhibiting all three (3) wetland criteria, the wetland area was assigned a letter designation (e.g., Wetland A) and the delineated boundary of the wetland area was flagged with consecutively numbered, pink and black striped field flagging. The location of each flag was mapped using a Trimble® GeoXH Global Positioning System (GPS) unit. A discussion of the three (3) evaluation criteria of a wetland is presented below.

Hydrophytic Vegetation

Hydrophytic vegetation is the community of macrophytes that occur in areas where inundation or soil saturation is either permanent or of sufficient frequency and duration to exert a controlling influence on the plant species present. Hydrophytic vegetation is present when the plant community is dominated by species that can tolerate prolonged inundation or soil saturation during the growing season. Hydrophytic vegetation is determined by the wetland indicator status (Reed, 1998, or current approved list) of species that make up the plant community. Species in the facultative categories (FACW, FAC, and FACU) are recognized as occurring in both wetlands and non-wetlands to varying degrees. In general, wetlands are dominated mainly by species rated OBL, FACW, and FAC.

The dominant vegetation, representing the major landscape or vegetation units, was determined for each of the four strata (tree, sapling/shrub, herbaceous, and vine) within one or more sampling plots established in representative locations within each unit. Plot size is determined by the type of vegetation present in accordance with the following table.

Trees	30-foot radius	Herb	5-foot radius
Saplings/shrubs	15-foot radius	Woody Vines	30-foot radius

In general, percent cover for all species was estimated to determine abundance (dominance). For species determined to be dominant, the appropriate indicator status was assigned. If all dominant species across all strata were listed as OBL and/or FACW, the plot was determined to exhibit hydrophytic vegetation and a detailed comparison of all dominant species was not necessary to make this determination. If the plot is not dominated solely by OBL and FACW species across all strata, dominant species within all strata were then added to determine the percentage of wetland vegetation for each sample point. The hydrophytic vegetation criterion was determined to be met if greater than 50 percent of the dominant vegetation across all strata was indicative of hydrophytic vegetation.

<u>Hydric Soils</u>

Hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part of the soil profile. To determine the extent of hydric soils in the Study Area, soil samples were obtained at each data point or at a point proximal to a data point that best represents the estimated boundary of hydric/non-hydric soils based on other field observations. A standard Munsell soil color chart was used to determine the hue, value, and chroma of each soil sample. Soil samples were taken at a sufficient depth such that soil conditions immediately below the A horizon or at a depth of ten (10) inches, whichever is shallowest, can be observed. Criteria established by the National Technical Committee for Hydric Soils (1991 and 2006) were used to determine hydric soils. Hydric soil indicators including redox depletions (gley), low chroma colors with redox concentrations (mottles), histosols (organic matter accumulation – muck/peat), histic epipedons (organic soil over low chroma mineral soils), sulfidic odor, listing on a local hydric soils list, and listing on a national hydric soil list, are used to determine the presence of hydric soils.

Wetland Hydrology

Wetland hydrology indicators are used in combination with indicators of hydrophytic vegetation and hydric soils to determine whether an area is a wetland. Typically, vegetation and soils provide strong evidence that wetland hydrology is also present. Hydrology indicators provide evidence that the site has a *continuing* wetland hydrologic regime and confirm that an episode of inundation or soil saturation occurred recently. Hydrology indicators may provide little additional information about the timing, duration, or frequency of such events. Each data point was examined for the presence of primary and secondary hydrological indicators that indicate surface water or soil saturation, evidence of recent inundation, evidence of current or recent soil saturation, and other on-site conditions or data.



2.0 SITE DESCRIPTION

On May 15, 17, and 18, 2023, Benjamin Latoche, a certified wetland delineator with HZW, conducted a field investigation of the Study Area. The eastern portion of the 81.0-acre Study Area is developed with a single residential property with all the associated attendant features. The remining portions of the Study Area are largely undeveloped and consist of secondary growth forest predominating throughout the northern, western, and southwestern portions. A large emergent wetland runs southeast to northwest from the southern Study Area boundary to the northwestern region of the Study Area. A large, freshwater pond is also located in the southwestern portion of the Study Area is bordered by undeveloped forest and the Laurel Lake Retirement Community to the north, undeveloped forest and residential properties to the east, State Route 303 to the south, and the intermittent stream Mud Brook bordered by a large complex to the west. A site map depicting the location of the Study Area is included as **Figure 1** in **Appendix A**.

The Study Area is located within the Cuyahoga River watershed (HUC 8: 04110002) and is situated within the Erie/Ontario Drift and Lake Plain ecoregion.



3.0 FINDINGS

The findings of the background resources reviewed, and field investigation conducted as part of the delineation activities are discussed separately.

3.1 Background Research

3.1.1 2023 Hudson, Ohio, National Wetlands Inventory (NWI) Map

Several aquatic resources depicted within the boundaries of the Study Area on the NWI map. One (1) PUBG feature representing a freshwater pond is depicted in the southwestern corner of the Study Area. Two (2) PSSIC features are depicted in the southern portion of the Study Area. Two (2) R4SBC feature representing intermittent streams converge in the northwestern corner of the Study Area and exit through the western Study Area boundary. Lastly, one (1) additional R4SBS intermittent stream feature named Mud Brook is narrowly on site as it parallels the western Study Area boundary.

3.1.2 2023 Hudson, Ohio, USGS 7.5 Minute Topographic Quadrangle Map

The Hudson, Ohio, USGS 7.5-minute topographic quadrangle maps indicates that the eastern and northeastern portions of the Study Area exhibit moderately rolling topography which ranges from approximately 1,000 to 1,010 feet above National Geodetic Vertical Datum (NGVD). The southern and northwestern portions of the Study Area exhibit flat topography; however, the Study Area very gently slopes northwest from approximately 1,100 to 1000 feet above NGVD between these two (2) areas. Aquatic resources depicted on the topographic quadrangle map include one (1) unnamed, southwest-flowing, intermittent stream which bisects the center of the Study Area from northeast to southwest. An additional, unnamed, intermittent stream flows south from a small, freshwater pond in the far northeast corner of the Study Area and converges with the aforementioned stream in the northeastern portion of the Study Area. An additional, small, freshwater pond is depicted in the eastern portion of the Study Area. A larger freshwater pond is also depicted in the southwestern portion of the Study Area. Lastly a named, southeast-flowing intermittent stream, Mud Brook, parallels the western Study Area boundary. The portion of the Hudson, Ohio, topographic quadrangle map depicting the Study Area is presented as **Figure 2** in **Appendix A**.

3.1.3 2023 Soil Survey of Summit County

The Soil Survey shows that the Study Area is underlain by ten (10) soil types:

BhB Bogart-Haskins loams, 2 to 6 percent slopes. The gently undulating soils in this complex are mostly on terraces in the northern part of the county. Bogart soils formed in fairly thick outwash material make up about 50 percent of the complex, Haskins soils about 40 percent and Jim town soils about 10 percent. Haskins soils formed in thin outwash material and the underlying glacial or clayey material that is within a depth of 20 to 40 inches. Haskins soils are wetter than Bogart soils. Haskins and Jimtown soils are somewhat poorly drained. Runoff is medium, and erosion is a moderate hazard in areas where runoff is concentrated. Because Bogart and Haskins soils are seasonally wet,

wetness is a limitation to some nonfarm uses. Seasonal wetness is more severe on Haskins soils than it is on Bogart soils. This soil is mapped in the southern portion of the Study Area.

- **Ca Canadice silty clay loam.** This nearly level, slightly depressional soil is on terraces mainly in the northern part of the county. Included in mapping are small spots of soils in shallow depressions that are very poorly drained. Seasonal wetness and slow permeability are limitations to most uses of this soil. Runoff is slow to ponded. This soil is mapped in the northern portion of the Property.
- **CcB Caneadea silt loam, 2 to 6 percent slopes.** This is a deep, gently sloping, and somewhat-poorly drained soil found on undulating terraces. Included in mapping are small knolls of moderately well-drained Glenford and Geeburg soils, and areas of soils that have a silt mantle. Also included, particularly in shallow drainageways and depressions, are small spots of poorly drained Canadice soils, which are wetter than this Caneadea soil. Permeability is very slow, resulting in seasonal wetness, and runoff is rapid. Some areas are moderately eroded. This soil is mapped in the northern portion of the Study Area.
- **FcB Fitchville silt loam, 2 to 6 percent slopes.** This nearly level to gently sloping somewhat-poorly drained soil is on terraces and alluvial fans. Included in mapping, particularly on the more sloping knolls, are small spots of moderately well drained Glenford soils. Seasonal wetness and slow permeability are limitations of this soil. Runoff is medium to rapid. This soil is mapped in the western, central and eastern portions of the Study Area.
- **GbC2 Glenford silt loam, 6 to 12 percent slopes.** This soil is on hillsides in the Cuyahoga River valley. Included in mapping are small spots of Ellsworth and Glenford soils and areas of soils that are not eroded. Runoff is rapid and permeability is slow. This soil is mapped in the central portion of the Study Area.
- Ln Lorain silty clay loam. This soil is nearly level and is most extensive in Hudson and Twinsburg Townships and in Stow Village. The surface layer has a high organic matter content. Included in mapping are small areas of soils that have a dark-colored surface layer more than 10 inches thick. Also included, particularly in the lowest part of the landscape, are areas of soils that have a thin, mucky surface layer. Other inclusion are small spots of more silty Luray soils, a few areas of soils that have a silty clay or silt clay that has slopes of 2 to 4 percent and is adjacent to steep walls of the Cuyahoga River Valley. A high water table and slow permeability are major limitations to most nonfarm uses of this soil. This soil is in the Study Area.

Sb Sebring silt loam. This nearly level soil is on broad, low terraces. Included in mapping, particularly in shallow depressions, are small spots of dark-colored, very poorly drained Luray soils. In addition, a few areas have a silty clay loam surface layer that is sticky when wet. Runoff is slow to ponded. Moderately-slow permeability and seasonal wetness are limitations to many non-farm uses of this soil. This soil is mapped in the northern, northwestern, western, and southwestern portions of the Study Area.

aquatic resources are depicted within the boundaries of the Study Area on the Soil Survey map.

3.1.4 Hydric Soils List for Summit County

According to the list of hydric soils for Summit County, all ten (10) soils units depicted as underlying the Study Area on the Soil Survey, BgB, CnB, CnC, CoC2, CoD2, CyE, JtB, LoB, WrA, and WrB, are considered non-hydric.

3.2 Field Investigation

3.2.1 Wetland Areas Delineated

Field investigation data gathered on May 15, 17, and 18, 2023, identified five (5) areas within the boundaries of the Study Area that are classified as wetlands based on the presence of the three (3) wetland criteria (wetland hydrology, hydric soils, and hydrophytic vegetation). This area is designated by HZW as "Wetland A" through "Wetland F". The location of the wetlands and the location of the wetland data points (designated "DP1", "DP3", "DP5", "DP6", "DP8", "DP13", "DP15", "DP16", and "DP17") established during delineation activities is indicated on the aquatic resources map presented as **Figure 3A** in **Appendix A**. A map depicting the aquatic resources overlaying an aerial photograph is presented as **Figure 3B** in **Appendix A**. The photographic log prepared for the Study Area during the field investigation activities is included as **Appendix B**. The wetland determination data forms prepared for the Study Area are included as **Appendix C**. The quality of these wetlands was evaluated by HZW using the Ohio Rapid Assessment Method Version 5.0 (ORAM). The ORAM data forms are included as **Appendix D**. A description of the wetland area identified within the boundaries of the Study Area is provided in **Table 1**, below.

Table 1 - Sum	mary of	On-Site	Wetlands

Type Da	ata Point Pho	otograph	Acres 0	<u>RAM Score</u> (Category)
mergent	DP1	1, 2	018* 26.0) (Categ <mark>ory 1)</mark>
mergent	DP3	5, 6	0.05 25.0) (Category 1)
mergent	DP5	9, 10	0.22 24.0) (Category 1)
d / Emergent / DP6, rub-Shrub DI	DP8, DP15, 11, 12, P16, DP17 34,	15, 16, 29- 16.81* / 37, 41-42 TOT	11.81* / 1.74* AL: 30.12* 51.5	5 (Category 2)
Forested	DP13 2	25, 26	0.13 48.0) (Category 2)
	Type Da mergent mergent mergent d / Emergent / DP6, rub-Shrub DI Forested	TypeData PointPhomergentDP1mergentDP3mergentDP5d / Emergent /DP6, DP8, DP15,11, 12,cub-ShrubDP16, DP1734,corestedDP1323	TypeData PointPhotographmergentDP11, 2mergentDP35, 6mergentDP59, 10d / Emergent /DP6, DP8, DP15,11, 12, 15, 16, 29-16.81* / TOTcorestedDP1325, 26	Type Data Point Photograph Acres O mergent DP1 1, 2 018* 26.0 mergent DP3 5, 6 0.05 25.0 mergent DP5 9, 10 0.22 24.0 d / Emergent / DP6, DP8, DP15, 11, 12, 15, 16, 29- 16.81* / 11.81* / 1.74* 51.5 corested DP13 25, 26 0.13 48.0

*Represents on-site acreage

3.2.2 Streams Delineated

One (1) southwest-flowing stream designated by HZW as "Stream 1" was identified in the center of the Study Area. The quality of "Stream 1" was evaluated using the 2009 Primary Headwater Habitat (PHWH) evaluation form which calculates a numerical Headwater Habitat Evaluation Index (HHEI) score. The PHWH evaluation forms and associated HHEI score for "Stream 1" are included as **Appendix E**. A description of the Stream 1 is provided in **Table 2**, below.

Table 2 - Summary of On-Site Streams

<u>Stream</u>	Туре	<u>Length</u> <u>(feet)</u>	<u>Length in</u> Culvert <u>(feet)</u>	<u>Average</u> Width <u>(feet)</u>	<u>Acres</u>	Photograph	HHEI Score (Class)
1	Intermittent	711.6*	57.8	3.5	0.057*	35, 36	38 (Modified Class II)
			*Represe	nts on-site	length		

3.2.3 Non-Wetland Areas

The data collected at the remaining data points, "DP2", "DP4", "DP7", "DP9", "DP10", "DP11", "DP12", and "DP14", did not meet all of the criteria of a wetland; therefore, these areas are considered non-wetland. Refer to the aquatic resources map presented as **Figure 3A** in **Appendix A** for the location of "DP2", "DP4", "DP7", "DP9", "DP10", "DP11", "DP12", and "DP14", and the wetland determination data forms included as **Appendix C** for more detailed information regarding the hydrology, soils, and vegetation found at the non-wetland data points.

3.2.4 Other Aquatic Resources

One (1) southwest-flowing ditch was identified in the northern portion of the Study Area during the field investigation and is designated by HZW as "Ditch 1". Additionally, one (1) pond was identified in the southwestern portion of the Study Area and is designated as "Pond 1". The location of the "Ditch 1" and "Pond 1" is indicated on the aquatic resources maps presented as **Figure 3A** and **Figure 3B** in **Appendix A**. Photographs of these aquatic resources are presented in the photographic log prepared for the Study Area in **Appendix B**.

4.0 CONCLUSIONS

In summary, five (5) areas within the Study Area were identified as containing hydrophytic vegetation, hydric soil, and wetland hydrology, and, therefore, are considered wetlands. Additionally, one (1) stream, one (1) ditch, and one (1) pond were identified. Upon completion of the delineation, the location and configuration of the wetlands, stream, ditch, and pond located within the Study Area were mapped using a Trimble[®] GeoXH GPS unit, which has an accuracy of less than one (1) meter.

The Corps will make the final determination regarding jurisdiction of the identified aquatic resources during the affirmation process.



5.0 DISCUSSION OF FUTURE PERMITTING SCENARIOS

Based on the United States Supreme Court ruling (No. 99-1178), issued on January 9, 2001, it is HZW's understanding that those wetlands that are non-navigable, isolated, and intrastate may no longer be included in the Corps' jurisdiction. In order to inform the Client of all available scenarios pertaining to the development of the Study Area, discussions presented in this report are based on the wetland delineation activities being conducted in accordance with the <u>1987 Manual</u> and the <u>Regional Supplement</u>, which evaluate wetland characteristics irrespective of whether the wetland area is considered to be non-isolated (federally-regulated) or isolated (state-regulated). Currently, the Corps is making jurisdictional determinations.

For most Nationwide Permits (NWP), if the impacts associated with the activity/development do not exceed 0.50 of an acre of non-isolated wetlands, coverage under an NWP is appropriate. (Note: all stream impacts must be converted to an acreage and added to the non-isolated wetland impacts; the total impact to all "waters of the U.S." must be under 0.50 of an acre to qualify for this coverage.) A preconstruction notification (NWP application) is required for coverage under most NWPs and compensatory mitigation is generally required.

If future development would impact greater than 0.50 of an acre of waters of the United States, a Section 404 Individual Permit from the Corps and a Section 401 Water Quality Certification from the Ohio EPA would be required prior to initiating construction activities. The Corps and Ohio EPA will likely require mitigation for all wetland and stream impacts.

For those wetlands that are only within the jurisdiction of the Ohio EPA, regulations have been developed as House Bill 231. Currently, if less than 0.50 of an acre of isolated wetland impacts are proposed, a General Isolated Wetland Permit (Level 1 Review) will be required prior to impacting those wetlands. Isolated wetland impacts over 0.50 of an acre will require a more detailed permitting process with the Ohio EPA. Compensatory mitigation will be required for any amount of isolated wetland impact.



6.0 **RECOMMENDATIONS**

Based on the findings presented above, HZW presents the following recommendations for consideration at the Study Area:

- 1. Submit one (1) copy of this wetland delineation report to the Corps for affirmation of the boundaries and jurisdictional determination of the aquatic resources located within the Study Area. Presently, the Corps is the agency responsible for conducting wetland affirmations and is providing written jurisdictional determinations.
- 2. Should impacts be anticipated to the aquatic resources identified on site following a jurisdictional determination, obtain the appropriate permit from the Corps and/or Ohio EPA prior to impacting these areas.
- **Note:** Should the Corps desire to conduct a field affirmation, additional regulated waters may be identified within the boundaries of the Study Area based on differing field conditions than present during the time this delineation study was conducted.



7.0 REFERENCES

A bibliography of references reviewed as part of this delineation is presented below.

7.1 Bibliography

- 1. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at http://websoilsurvey.nrcs.usda.gov/. Accessed [4/27/23]
- 2. U. S. Fish and Wildlife Service. 2021. National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. http://www.fws.gov/wetlands [4/27/23]
- 3. *Topographic Map*, United States Geological Survey; 2023 Hudson, Ohio, USGS 7.5 Minute Topographic Quadrangle.
- 4. *Field Guide for Wetland Delineation*, United States Army Corps of Engineers, Technical Report Y-87-1, 1987.
- 5. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)*, United States Army Corps of Engineers, ERDC/EL TR-12-01, 2012.
- 6. *List of Hydric Soils for Summit County*, Natural Resource Conservation Service.
- 7. *National List of Plant Species That Occur in Wetlands: Ohio*, Reed, Porter B., Jr., United States Fish and Wildlife Service, Saint Petersburg, 1988.
- 8. *Hydric Soils of the United States*, National Technical Committee for Hydric Soils, United States Department of Agriculture, Soil Conservation Service, Washington, 1991.
- 9. Ohio EPA. 2018. Field Methods for Evaluating Primary Headwater Streams in Ohio. Version 4.0. Ohio EPA Division of Surface Water, Columbus, Ohio. 129pp.
- 10. Mack, John J. 2001. Ohio Rapid Assessment Method for Wetlands v. 5.0, User's Manual and Scoring Forms. Ohio EPA Technical Report WET/2001-1. Ohio Environmental Protection Agency, Division of Surface Water, 401/Wetland Ecology Unit, Columbus, Ohio.

8.0 QUALIFICATIONS

This wetland delineation was conducted on May 15, 17, and 18, 2023, by HZW's certified wetland delineator Benjamin Latoche. Data collection and report writing was completed by Benjamin Latoche. The signatures of the environmental professionals responsible for the preparation of this report are provided below.

Benjamin Latoche Group Leader - Wetlands & Ecology



APPENDIX A

FIGURES 1-3

Figure 1 – Site Location Map Figure 2 – USGS Topographic Map Figure 3A – Aquatic Resources Map- White Figure 3B – Aquatic Resources Map- Aerial















FIGURE 3B

AQUATIC RESOURCES MAP (AERIAL) 81 ACRES NORTH OF WEST STREETSBORO STREET CITY OF HUDSON, SUMMIT COUNTY, OHIO

APPENDIX B

PHOTOGRAPHIC LOG





Photograph 1 View of soil profile at Data Point 1 (Wetland A).



Photograph 2 View facing north depicting site conditions at Data Point 1 (Wetland A).



Photograph 3 View of soil profile at Data Point 2 (non-wetland).



Photograph 4 View facing west depicting site conditions at Data Point 2 (non-wetland).



Photograph 5 View of soil profile at Data Point 3 (Wetland B).



Photograph 6 View facing north depicting site conditions at Data Point 3 (Wetland B).



Photograph 7 View of soil profile at Data Point 4 (non-wetland).



Photograph 8 View facing west depicting site conditions at Data Point 4 (non-wetland).



Photograph 9 View of soil profile at Data Point 5 (Wetland C).



Photograph 10 View facing east depicting site conditions at Data Point 5 (Wetland C).



Photograph 11 View of soil profile at Data Point 6 (Wetland D - Forested).



Photograph 12 View facing south depicting site conditions at Data Point 6 (Wetland D - Forested).



Photograph 13 View of soil profile at Data Point 7 (non-wetland).



Photograph 14 View facing east depicting site conditions at Data Point 7 (non-wetland).



Photograph 15 View of soil profile at Data Point 8 (Wetland D - Emergent).



Photograph 16 View facing north depicting site conditions at Data Point 8 (Wetland D - Emergent).



Photograph 17 View of soil profile at Data Point 9 (non-wetland).



Photograph 18 View facing west depicting site conditions at Data Point 9 (non-wetland).



Photograph 19 View of soil profile at Data Point 10 (non-wetland).



Photograph 20 View facing north depicting site conditions at Data Point 10 (non-wetland).



Photograph 21 View of soil profile at Data Point 11 (non-wetland).



Photograph 22 View facing south depicting site conditions at Data Point 11 (non-wetland).



Photograph 23 View of soil profile at Data Point 12 (non-wetland).



Photograph 24 View facing west depicting site conditions at Data Point 12 (non-wetland).



Photograph 25 View of soil profile at Data Point 13 (Wetland E).



Photograph 26 View facing east depicting site conditions at Data Point 13 (non-wetland).



Photograph 27 View of soil profile at Data Point 14 (non-wetland).



Photograph 28 View facing north depicting site conditions at Data Point 14 (non-wetland).



Photograph 29 View of soil profile at Data Point 15 (Wetland D - Emergent).



Photograph 30 View facing south depicting site conditions at Data Point 15 (Wetland D - Emergent).


Photograph 31 View of soil profile at Data Point 16 (Wetland D - Forested).



Photograph 32 View facing south depicting site conditions at Data Point 16 (Wetland D - Forested).



Photograph 33 View of soil profile at Data Point 17 (Wetland D – Scrub-Shrub).



Photograph 34 View facing north depicting site conditions at Data Point 17 (Wetland D – Scrub-Shrub).



Photograph 35 Upstream view of Stream 1 facing northeast.



Photograph 36 Downstream view of Stream 1 facing southwest.



Photograph 37 Upstream view of Ditch 1 at its junction with Wetland D - Forested facing northeast.



Photograph 38 Downstream view of Ditch 1 facing west.



Photograph 39 Downstream view of Ditch 1 facing west toward its junction with Wetland D – Forested.



Photograph 40 View of Pond 1 facing northwest.



Photograph 41 View of Wetland D – Forested facing east.



Photograph 42 View of Wetland D – Emergent facing northeast.



Photograph 43 View of Wetland D – Emergent facing north.



Photograph 44 View of Study Area facing south.

APPENDIX C

WETLAND DETERMINATION DATA FORMS



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Northcentral and See ERDC/EL TR-12-1; the proponent agency is CE	I Northeast Region CW-CO-R	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
Project/Site: Proposed River Oaks Subdivision Property Applicant/Owner: GVI, LLC	City/County: <u>Hudson / Su</u>	ummit County Sampling Date: <u>5-15-23</u> State:OHSampling Point:DP1
Investigator(s): BDL / EW	Section, Townsh	nip, Range:
Landform (hillside, terrace, etc.): Depression Local re	elief (concave, convex, no	one): Concave Slope %: 0
Subregion (LRR or MLRA): LRR R Lat: 41.236093	Long: -81	.467519 Datum: NAD83
Soil Map Unit Name:	0	NWI classification: PEM
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X	No (If no, explain in Remarks.)
Are Vegetation No . Soil No . or Hydrology No significantly disturb	ed? Are "Normal C	Circumstances" present? Yes X No
Are Vegetation No Soil No or Hydrology No naturally problemat	tic? (If needed, ex	plain any answers in Remarks.)
SUMMARY OF FINDINGS Attach site man abowing some	aling noint location	
SUMMARY OF FINDINGS – Attach site map snowing samp	pling point location	is, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area	
Hydric Soil Present? Yes X No	within a Wetland?	Yes <u>X</u> No
Wetland Hydrology Present? Yes X No	If yes, optional Wetland	d Site ID: Wetland A
Remarks: (Explain alternative procedures here or in a separate report.)		
Wetland Hydrology Indicators:	Sec	condary Indicators (minimum of two required)
Surface Water (A1) Water-Stained Leaves (B	9)	Drainage Patterns (B10)
X High Water Table (A2) Aguatic Fauna (B13)		Moss Trim Lines (B16)
X Saturation (A3) Marl Deposits (B15)		Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C	C1)	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres or	n Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron	n (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	s)	Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	<u>X</u>	FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes No X Depth (inches):		
Water Lable Present? Yes X No Depth (inches):	<u>10</u>	
(includes capillary fringe)		varology Present? fes <u>×</u> No
Describe Recorded Data (stream gauge monitoring well aerial photos prev	vious inspections) if avai	lable:
Remarks:		

	Absolute	Dominant	Indicator	
<u>Tree Stratum</u> (Plot size: <u>30</u>)	% Cover	Species?	Status	Dominance Test worksheet:
1. Salix nigra	20	Yes	OBL	Number of Dominant Species
2. Ulmus americana	15	Yes	FACW	That Are OBL, FACW, or FAC:5(A)
3		·		Total Number of Dominant
4		. <u> </u>		Species Across All Strata: 5 (B)
5 6				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
7.				Prevalence Index worksheet:
	35	=Total Cover		Total % Cover of: Multiply by:
<u>Sapling/Shrub Stratum</u> (Plot size: 15)				OBL species x 1 =
1.				FACW species x 2 =
2.				FAC species x 3 =
3.				FACU species x 4 =
4.		·		UPL species x 5 =
5.		·		Column Totals: (A) (B)
6				Prevalence Index = B/A =
7		·		Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 5)				X 2 - Dominance Test is >50%
1 Carex vulninoidea	25	Ves	OBI	$3 = \text{Prevalence Index is } \le 30^{1}$
	10	No		4 - Morphological Adaptations ¹ (Provide supporting
2. Dulicus enusus	20	 		data in Remarks or on a separate sheet)
	30	Vee		Problematic Undrenbutic Magnetation ¹ (Evaluin)
4. Instonosa				
5. <u>Alilaria petiolata</u>	5	NO	FACU	¹ Indicators of hydric soil and wetland hydrology must
6		·		be present, unless disturbed or problematic.
<i>1</i>		·		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
	90	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 30)				Woody vines – All woody vines greater than 3.28 ft in
1				height.
2				Hydrophytic
3				Vegetation
4.				Present?
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)			
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0-8 10YR 4/1 8-20 2.5Y 5/1		10YR 5/6	30			Loamy/Clayey Loamy/Clayey	Prominent redox concentrations
8-20 2.5Y 5/1		10YR 5/6	30	<u> </u>		Loamy/Clayey	Prominent redox concentrations
¹ Type: C=Concentration, D=De Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5)	pletion, RM	=Reduced Matrix, N Dark Surface (Polyvalue Belo MLRA 149B Thin Dark Surf High Chroma \$	MS=Masi S7) S7) w Surfac i) face (S9) Sands (S	 ked Sanc ce (S8) (I	 I Grains. RR R, _	² Location: F Indicators f 2 cm Mu 2 cm Mu 2 cm Mu 5 cm Mu 5 cm Mu 5 tm Mu 5 t	PL=Pore Lining, M=Matrix. or Problematic Hydric Soils ³ : Jck (A10) (LRR K, L, MLRA 149B) rairie Redox (A16) (LRR K, L, R) Jcky Peat or Peat (S3) (LRR K, L, R) Jcky Peat or Peat (S3) (LRR K, L, R) Jcky Peat or Peat (S3) (LRR K, L) rk Surface (S9) (LRR K, L)
Depleted Below Dark Surfa	ce (A11)	Loamy Mucky	Mineral ((F1) (LRI	R K, L)	Iron-Mai	nganese Masses (F12) (LRR K, L, R)
Mesic Spodic (A12)		X Depleted Matri	i Matrix (I ix (F3)	F2)		Piedmoi Red Par	rent Material (F21) (MLRA 149B)
(MLRA 144A, 145, 149E	5)	Redox Dark Su	urface (F	6)		Very Sh	allow Dark Surface (F22)
Sandy Mucky Mineral (S1)		Depleted Dark	Surface	(F7)		Other (E	Explain in Remarks)
Sandy Gleyed Matrix (S4)		Redox Depres	sions (F8	3)		2	
Sandy Redox (S5)		Marl (F10) (LR	R K, L)			°Indicato	ors of hydrophytic vegetation and
Stripped Matrix (S6)		Red Parent Ma	aterial (F	21) (MLF	RA 145)	wetlar unless	nd hydrology must be present, s disturbed or problematic.
Restrictive Layer (if observed):						
Depth (inches):						Hvdric Soil Prese	nt? Yes X No
Remarks:						,	<u> </u>

U.S. Army Co WETLAND DETERMINATION DATA SI See ERDC/EL TR-12-1; the p	orps of Engineers HEET – Northcentral and proponent agency is CE	d Northeast Region ECW-CO-R	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
Project/Site: Proposed River Oaks Subdivision	n Property	City/County: Hudson / Su	Immit County Sampling Date: 5-15-23
Applicant/Owner: GVI, LLC			
Investigator(s): BDL / EW		Section, Townsh	ip, Range:
Landform (hillside, terrace, etc.): Depression	Local re	elief (concave, convex, no	one): <u>Concave</u> Slope %: <u>0</u>
Subregion (LRR or MLRA): LRR R	Lat: 41.236073	Long: <u>-81</u> .	467674 Datum: NAD83
Soil Map Unit Name:			NWI classification:
Are climatic / hydrologic conditions on the site ty	ypical for this time of year?	Yes X	No (If no, explain in Remarks.)
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrolo	gy <u>No</u> significantly disturb	bed? Are "Normal C	ircumstances" present? Yes X No
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrolog	gy <u>No</u> naturally problema	tic? (If needed, exp	plain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach s	ite map showing sam	pling point location	s, transects, important features, etc.
Hydrophytic Vegetation Present?	Yes No X	Is the Sampled Area	
Hydrophytic Vegetation recent?	res No X	within a Wetland?	Yes No X
Wetland Hydrology Present? Y	res No X	If yes, optional Wetland	I Site ID:
Remarks: (Explain alternative procedures bere	e or in a separate report)		
HYDROLOGY			
Wetland Hydrology Indicators:		Sec	condary Indicators (minimum of two required)
Primary Indicators (minimum of one is required	d; check all that apply)		Surface Soil Cracks (B6)
Surface Water (A1)	Water-Stained Leaves (E	39)	Drainage Patterns (B10)
High Water Table (A2)	Aquatic Fauna (B13)		Moss Trim Lines (B16)
Saturation (A3)	Mari Deposits (B15)		Dry-Season Water Table (C2)
Water Marks (B1)	Hydrogen Suilide Odor (un Living Poots (C3)	Crayiish Burrows (C8)
Drift Deposits (B3)	Presence of Reduced Iro	$\frac{1}{2} (C4)$	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 Aguitard (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remark	(s)	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 Hy	drology Present? Yes No X
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monit	toring well, aerial photos, pre	vious inspections), if avail	able:
Remarks:			

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1				Number of Dominant Species
2				That Are OBL, FACW, or FAC:(A)
3.				Total Number of Dominant
4.				Species Across All Strata: 2 (B)
5.				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 0.0% (A/B)
7				Prevalence Index worksheet:
		=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 15)				OBL species 0 x 1 = 0
1				FACW species 5 x 2 = 10
2.				FAC species 0 x 3 = 0
3				FACU species 95 x 4 = 380
4				UPL species 0 x 5 = 0
5				Column Totals: 100 (A) 390 (B)
6				Prevalence Index = B/A = 3.90
7				Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 5)				2 - Dominance Test is >50%
1. Dactylis glomerata	15	No	FACU	3 - Prevalence Index is ≤3.0 ¹
2. Poa pratensis	45	Yes	FACU	4 - Morphological Adaptations ¹ (Provide supporting
3. Potentilla indica	20	Yes	FACU	data in Remarks or on a separate sheet)
4. Digitaria sanguinalis	15	No	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Phalaris arundinacea	5	No	FACW	¹ 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				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: 30)				Woody vines – All woody vines greater than 3.28 ft in
1				height.
2				Hudronhutic
3				Vegetation
4				Present? Yes <u>No X</u>
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)			
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Depth Matrix	Redo	x Featur	es		initia the absence of i	indicators.)
(inches) Color (moist) %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-10 2.5Y 5/3 10	0				Loamy/Clayey	
10-20 2.5Y 5/3 8	5 10YR 5/8	15	С	М	Loamy/Clayey	Prominent redox concentrations
			_			
				·		
				·		
¹ Type: C=Concentration, D=Depletion	RM=Reduced Matrix, N	∕IS=Masl	ked Sand	l Grains.	² Location: PL=	=Pore Lining, M=Matrix.
Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Mesic Spodic (A17) (MLRA 144A, 145, 149B) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Restrictive Layer (if observed): Type:	Dark Surface (Polyvalue Belo MLRA 149B Thin Dark Surf High Chroma S Loamy Mucky Loamy Gleyed Depleted Matri Redox Dark St Depleted Dark Redox Depres Marl (F10) (LR Red Parent Ma	S7) w Surface) acce (S9) Sands (S Mineral (Matrix (I ix (F3) urface (F Surface sions (F R K, L) aterial (F.	ce (S8) (I (LRR R, 11) (LRF (F1) (LRF F2) 6) (F7) 3) 21) (MLF	-RR R, MLRA 1 ₹ K, L) ₹ K, L)	2 cm Mucl Coast Prai 5 cm Mucl Polyvalue Thin Dark Iron-Mang Piedmont Red Parer Very Shall Other (Exp ³ Indicators wetland unless c	k (A10) (LRR K, L, MLRA 149B) irie Redox (A16) (LRR K, L, R) ky Peat or Peat (S3) (LRR K, L, R) Below Surface (S8) (LRR K, L) Surface (S9) (LRR K, L) janese Masses (F12) (LRR K, L, R) Floodplain Soils (F19) (MLRA 149E nt Material (F21) (outside MLRA 14 low Dark Surface (F22) plain in Remarks) s of hydrophytic vegetation and hydrology must be present, disturbed or problematic.
Remarks:					Hydric Soll Present	? Yes <u>No X</u>

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Northcentral and See ERDC/EL TR-12-1; the proponent agency is CE	d Northeast Region ECW-CO-R	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)			
Project/Site: Proposed River Oaks Subdivision Property	City/County: Hudson /	Summit County Sampling Date: 5-15-23			
Applicant/Owner: GVI, LLC		State: OH Sampling Point: DP3			
Investigator(s): BDL / EW	Section, Towr	nship, Range:			
Landform (hillside terrace etc.): Depression Local re	elief (concave, convex	none): Concave Slope %: 0			
Subregion (I RR or MLRA): LRR R Lat: 41.236054		81.467117 Datum: NAD83			
Soil Map Unit Name:	Long	NWI classification: PEM			
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X	No (If no, explain in Remarks.)			
Are Vegetation No , Soil No , or Hydrology No significantly disturb	oed? Are "Norma	Il Circumstances" present? Yes X No			
Are Vegetation No , Soil No , or Hydrology No naturally problema	tic? (If needed,	explain any answers in Remarks.)			
SUMMARY OF FINDINGS – Attach site man showing sam	nling point locati	one transacte important features etc.			
Sommart OF Findings – Allach site map showing sam		ons, transects, important reatures, etc.			
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Are	a			
Hydric Soil Present? Yes X No	within a Wetland?	Yes <u>X</u> No			
Wetland Hydrology Present? Yes X No	If yes, optional Wetla	and Site ID: Wetland B			
Remarks: (Explain alternative procedures here or in a separate report.)					
HYDROLOGY					
Wetland Hydrology Indicators:	<u> </u>	Secondary Indicators (minimum of two required)			
Primary Indicators (minimum of one is required; check all that apply)		Surface Soil Cracks (B6)			
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 (C	C1) –	Crayfish Burrows (C8)			
Sediment Deposits (B2) Oxidized Rhizospheres o	n 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)	X 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)		X_FAC-Neutral Test (D5)			
Field Observations:					
Surface Water Present? Yes X No Depth (inches):	1				
Water Table Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches):	Wotland	Hydrology Present? Ves Y No			
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if a	vailable:			
Remarks:					

	Absolute	Dominant	Indicator	
Iree Stratum (Plot size: 30)	% Cover	Species?	Status	Dominance Test worksheet:
1				Number of Dominant Species
2				That Are OBL, FACW, or FAC:(A)
3.				Total Number of Dominant
4.				Species Across All Strata: 3 (B)
5				
				Percent of Dominant Species
7				Provelence Index worksheet:
1.		Tatal Osuar		
		= I otal Cover		I otal % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 15)				OBL species x 1 =
1				FACW species x 2 =
2				FAC species x 3 =
3				FACU species x 4 =
4				UPL species x 5 =
5.				Column Totals: (A) (B)
6.				Prevalence Index = B/A =
7.				Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Ranid Test for Hydrophytic Vegetation
Horb Stratum (Diat aiza: 5)				X_{2} Deminance Test is $>50\%$
	05		54.011	
1. Phieum pratense	25	Yes	FACU	3 - Prevalence Index is ≤3.0
2. Onoclea sensibilis	25	Yes	FACW	4 - Morphological Adaptations ' (Provide supporting
3. Phalaris arundinacea	30	Yes	FACW	data in Remarks of on a separate sheet)
4. Juncus effusus	10	No	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Carex vulpinoidea	5	No	OBL	¹ Indicators of hydric soil and wetland hydrology must
6.				be present, unless disturbed or problematic.
7.				Definitions of Vegetation Strata:
8.				
9				diameter at breast height (DBH) regardless of height
10				
14				Sapling/shrub – Woody plants less than 3 in. DBH
11				
12				Herb – All herbaceous (non-woody) plants, regardless
	95	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 30)				Woody vines – 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	ate sheet)			
······································	,			
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(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Rema	rks
0-20	2.5Y 5/1	75	5YR 5/8	25	С	М	Loamy/Clayey	Pro	ominent redox o	concentrations
<u> </u>										
· .										
·										
<u> </u>										
1Type: C=Con	contration D-Don	lotion PM			kod San	Grains	² Locatio	n: DI -Dor	olining M-Ma	atrix
Hydric Soil In	dicators:			10-11/105	Keu Sant	i Grains.	Indicat	ors for Pro	blematic Hydr	ic Soils ³ :
Histosol (A	A1)		Dark Surface (S7)			2 c	m Muck (A1	10) (LRR K, L ,	MLRA 149B)
Histic Epig	pedon (A2)		Polyvalue Belo	, w Surfa	ce (S8) (LRR R,	Coa	ast Prairie F	Redox (A16) (LI	RR K, L, R)
Black Hist	ic (A3)		 MLRA 149B)	(-/(,	5 c	m Muckv P	eat or Peat (S3) (LRR K. L. R)
Hvdroaen	Sulfide (A4)		Thin Dark Surf	, ace (S9) (LRR R	. MLRA	149B) Pol	vvalue Belo	w Surface (S8)	(LRR K. L)
Stratified L	_avers (A5)		High Chroma S	Sands (S	, (611) (LRI	, R K. L)		, n Dark Surf	ace (S9) (LRR	K. L)
Depleted I	Below Dark Surface	e (A11)	Loamy Mucky	Mineral	(F1) (LR	R K. L)	Iror	n-Manganes	se Masses (F12	2) (LRR K. L. R)
 Thick Darl	(Surface (A12)	()	Loamv Gleved	Matrix (F2)	, ,	Pie	dmont Floo	dplain Soils (F1	19) (MLRA 149B
Mesic Spo	dic (A17)		X Depleted Matri	x (F3)	,		Rec	d Parent Ma	aterial (F21) (or	utside MLRA 14
	144A, 145, 149B)		Redox Dark Si	urface (F	6)		Ver	v Shallow [)ark Surface (F	22)
Sandy Mu	cky Mineral (S1)		Depleted Dark	Surface	e (F7)		Oth	er (Explain	in Remarks)	/
Sandy Gle	eved Matrix (S4)		Redox Depres	sions (F	8)		0	(<u></u> , p.c		
Sandy Re	dox (S5)		Marl (F10) (LR	R K . L)	-)		³ Inc	licators of h	vdrophytic veg	etation and
Stripped M	Aatrix (S6)		Red Parent Ma	aterial (F	21) (MI F	RA 145)		etland hvd	rology must be	present
				iteriai (i	21) (11121	un 140)	u	nless distu	bed or problem	natic.
Restrictive La	yer (if observed):									
Depth (inc	hes):						Hydric Soil P	resent?	Yes X	No
• •	,									
Romarks:										

U.S. Army WETLAND DETERMINATION DATA See ERDC/EL TR-12-1; the	Corps of Engineers SHEET – Northcentral and e proponent agency is CE	d Northeast Region CW-CO-R	OMB Control #: 0710-0024, Exp: 11/30/20 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	24 :
Project/Site: Proposed River Oaks Subdivis Applicant/Owner: <u>GVI, LLC</u>	ion Property	City/County: <u>Hudson / Su</u>	mmit County Sampling Date: <u>5-15-2:</u> State: OH Sampling Point: DF	3 >4
Investigator(s). BDL/EW				
Landform (hillside, terrace, etc.): Plain	Local re	elief (concave, convex, no	ne): None Slope %:	0
Subregion (LRR or MLRA): LRR R	Lat: 41.236974	Long: <u>-81</u> .	467295 Datum: NAD83	}
Soil Map Unit Name:			NWI classification: N/A	
Are climatic / hydrologic conditions on the site	e typical for this time of year?	Yes X	No (If no, explain in Remarks.)	
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydro	logy <u>No</u> significantly disturb	bed? Are "Normal C	ircumstances" present? Yes X No	
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydro	ology <u>No</u> naturally problemat	tic? (If needed, exp	plain any answers in Remarks.)	
SUMMARY OF FINDINGS – Attach	site map showing sam	pling point location	s, transects, important features, et	ic.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: (Explain alternative procedures h	Yes X No Yes No X Yes No X ere or in a separate report.) Yes Yes	Is the Sampled Area within a Wetland? If yes, optional Wetland	Yes <u>No X</u> Site ID:	
HYDROLOGY				
Wetland Hydrology Indicators:		Sec	ondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required	red; check all that apply)		Surface Soil Cracks (B6)	
Surface Water (A1)	Water-Stained Leaves (B		Drainage Patterns (B10)	
High Water Table (A2)	Aquatic Fauna (B13)		Moss Trim Lines (B16)	
Saturation (A3)	Mari Deposits (B15)		Dry-Season Water Table (C2)	
Sodiment Deposits (B2)		un Living Poots (C3)	Saturation Visible on Aerial Imagon (CO)	
Drift Deposits (B3)	Presence of Reduced Iro	in (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	(s)	Microtopographic Relief (D4)	
Sparsely Vegetated Concave Surface (E	38)	·	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 Hy	drology Present? Yes <u>No</u>	Х
(includes capillary fringe)				
Describe Recorded Data (stream gauge, mo	nitoring well, aerial photos, prev	vious inspections), if avail	able:	
Remarks:				

<u>Tree Stratum</u> (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Pinus resinosa	60	Yes	FACU	
2.				Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
3		·		
4				Total Number of Dominant Species Across All Strata: 5 (B)
5		·		
6.		·		Percent of Dominant Species 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: 15)				OBL species x 1 =
1. Lonicera tatarica	5	Yes	FACU	FACW species x 2 =
2. Franqula alnus	5	Yes	FAC	FAC species x 3 =
3.		·		FACU species x 4 =
4.				UPL species x 5 =
5.		·		Column Totals: (A) (B)
6.		·		Prevalence Index = B/A =
7.		·		Hydrophytic Vegetation Indicators:
· · · · · · · · · · · · · · · · · · ·	10	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 5)				X 2 - Dominance Test is >50%
1. Toxicodendron radicans	40	Yes	FAC	3 - Prevalence Index is ≤3.0 ¹
2 Geum canadense	5	No	FAC	4 - Morphological Adaptations ¹ (Provide supporting
3 Fraxinus pennsylvanica	15	Yes	FACW	data in Remarks or on a separate sheet)
4				Problematic Hydrophytic Vegetation ¹ (Explain)
5		·		
6				'Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic
7		·		Definitions of Vegetation Strata:
8		·		
9		·		Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast beight (DBH) regardless of beight
10				
11.				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
12.				Have All borboscous (non woody) plants, regardless
	60	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 30)				Woody vines – All woody vines greater than 3 28 ft in
1				height.
2				
3				Hyarophytic Vegetation
4				Present? Yes X No
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)			
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· /	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Rema	rks
0-12	2.5Y 5/3	100	· · · · ·				Loamv/Clavev			
		<u> </u>								
						·				
		·				·				
		<u> </u>								
						<u> </u>				
¹ Type: C=Con	centration, D=Depl	etion, RM	=Reduced Matrix, N	/IS=Mas	ked Sand	Grains.	² Location:	PL=Pore	Lining, M=Ma	atrix.
Hydric Soil In	dicators:						Indicators	for Prob	lematic Hydr	ric Soils ³ :
Histosol (A	A1)	-	Dark Surface (S7)			2 cm M	/luck (A10) (LRR K, L,	MLRA 149B)
Histic Epip	oedon (A2)	-	Polyvalue Belo	w Surfa	ce (S8) (L	.RR R,	Coast	Prairie Re	edox (A16) (L	RR K, L, R)
Black Histi	ic (A3)		MLRA 149B	5)			5 cm M	/lucky Pea	at or Peat (S3	6) (LRR K, L, R)
Hydrogen	Sulfide (A4)	-	Thin Dark Surf	ace (S9) (LRR R,	MLRA 1	49B) Polyva	lue Belov	v Surface (S8) (LRR K, L)
Stratified L	₋ayers (A5)	-	High Chroma	Sands (S	611) (LRR	K, L)	Thin D	ark Surfa	ce (S9) (LRR	K, L)
Depleted E	Below Dark Surface	e (A11)	Loamy Mucky	Mineral	(F1) (LR R	κ, L)	Iron-M	anganese	e Masses (F12	2) (LRR K, L, R)
Thick Dark	c Surface (A12)	-	Loamy Gleyed	Matrix ((F2)		Piedm	ont Flood	plain Soils (F	19) (MLRA 149B)
Mesic Spo	odic (A17)	-	Depleted Matr	x (F3)			Red P	arent Mat	erial (F21) (o i	utside MLRA 145
(MLRA	144A, 145, 149B)	-	Redox Dark S	urface (F	-6)		Very S	hallow Da	ark Surface (F	-22)
Sandy Mu	cky Mineral (S1)	-	Depleted Dark	Surface	e (F7)		Other	(Explain ii	n Remarks)	
Sandy Gle	eyed Matrix (S4)	-	Redox Depres	sions (F	8)		3			
Sandy Rec	dox (S5)	-	Marl (F10) (LR	(R K, L)			Indica	itors of hy	drophytic veg	etation and
Stripped M	latrix (S6)		Red Parent Ma	aterial (F	21) (MLR	A 145)	wet	and hydro	logy must be	present,
Postrictivo La	wor (if observed):						unle	ss disturb	ed or problen	natic.
Restrictive La	iyer (il observed).									
Type [.]									N.	
Type:	hee).						Hydric Soil Dros	ont?	VAC	
Type: Depth (inc	hes):						Hydric Soil Pres	ent?	Yes	NO X

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Northcentral and See ERDC/EL TR-12-1; the proponent agency is CE	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)			
Project/Site: Proposed River Oaks Subdivision Property	City/County: Hudson / S	ummit County Sampling Date: 5-15-23		
Applicant/Owner: GVI. LLC		State: OH Sampling Point: DP5		
Investigator(s): BDI / FW	Section Townsh			
Londform (hilloide terrose etc.): Depression				
Landform (nillside, terrace, etc.): Depression Local r	eller (concave, convex, no	Slope %: 0		
Subregion (LRR or MLRA): LRR R Lat: 41.237537	Long: <u>-81</u>	.468028 Datum: NAD83		
Soil Map Unit Name:		NWI classification: PEM		
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X	No (If no, explain in Remarks.)		
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> significantly disturb	bed? Are "Normal C	Circumstances" present? Yes X No		
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> naturally problema	tic? (If needed, ex	plain any answers in Remarks.)		
SUMMARY OF FINDINGS – Attach site map showing sam	pling point location	ns. transects. important features. etc.		
	p	······································		
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area			
Hydric Soil Present? Yes X No	within a Wetland?	Yes <u>X</u> No		
Wetland Hydrology Present? Yes X No	If yes, optional Wetlan	d Site ID: Wetland C		
Remarks: (Explain alternative procedures here or in a separate report.)				
HYDROLOGY				
Wetland Hydrology Indicators:	Se	condary 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	39)	Drainage Patterns (B10)		
X High Water Table (A2) Aquatic Fauna (B13)		Moss Trim Lines (B16)		
X 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 Irc	on (C4)	Stunted or Stressed Plants (D1)		
Algal Mat or Crust (B4) Recent Iron Reduction in	Tilled Soils (C6) X	Geomorphic Position (D2)		
Iron Deposits (B5) Inin Muck Surface (C7)		Shallow Aquitard (D3)		
Sparsely Vegetated Concave Surface (B8)	xs)	EAC-Neutral Test (D5)		
	^			
Field Observations:				
Water Table Present? Yes <u>No A</u> Depth (inches):	12			
Saturation Present? Ves X No Depth (inches):	0 Wetland Hy	vdrology Present? Yes X No		
(includes capillary fringe)				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if avai	ilable:		
Remarks:				

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet
1		opeoles !	Jialus	Bommance rest worksheet.
2		·		Number of Dominant Species
2				
3				Total Number of Dominant
۳				opecies Acioss Ali Stiata. <u>2</u> (B)
5				Percent of Dominant Species
7		·		Prevalence Index worksheet:
···		-Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Diat size: 15)				
				EACW species
2				FAC species x3 =
2				
3				
4				Column Totale: (A) (B)
				$\frac{P(A)}{P(A)} = \frac{P(A)}{P(A)}$
7				
···		-Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Horb Stratum (Plataiza: 5)		- Total Cover		
<u>Herb Stratum</u> (Plot size. <u>5</u>)	40	Vee		2 - Dominance Test is >50%
Typna angustirolla	40	Yes		3 - Prevalence Index is ≤3.0
2. Unoclea sensibilis		Yes	FACW	data in Remarks or on a separate sheet)
	5		FAC	Problem stire the description (constantion 1 (Four tation)
4				Problematic Hydrophytic Vegetation (Explain)
5				¹ Indicators of hydric soil and wetland hydrology must
6				be present, unless disturbed or problematic.
<i>1.</i>				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
Weeks View Oberts (District Streets	60	= I otal Cover		or size, and woody plants less than 3.28 ft tall.
voody Vine Stratum (Plot size: 30)				Woody vines – All woody vines greater than 3.28 ft in
I				neigni.
2.				Hydrophytic
3				Vegetation
4				Present? Yes <u>×</u> No
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)			
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(inches) Color (moist)	% (Color (moist)	%	Type ¹	Loc ²	Т	exture	Remarks	
0-20 10YR 5/1	85	10YR 5/2	15	<u> </u>	M	Loam	v/Clavev	Eaint redox concentrat	ions
		1011(3/2				LUAN			10113
				_	_				
				_	_				
			_						
¹ Type: C=Concentration, D=Depletio	n, RM=Re	educed Matrix, N	MS=Masl	ked Sand	Grains.		² Location: PL	=Pore Lining, M=Matrix.	
Hydric Soil Indicators:							Indicators for	r Problematic Hydric Soils	³ :
Histosol (A1)		Dark Surface ((S7)				2 cm Muc	ck (A10) (LRR K, L, MLRA 1	1 49B)
Histic Epipedon (A2)		Polyvalue Belo	ow Surfa	ce (S8) (l	LRR R,		Coast Pra	airie Redox (A16) (LRR K, L	., R)
Black Histic (A3)		MLRA 149B	B)				5 cm Muc	cky Peat or Peat (S3) (LRR	K, L, R)
Hydrogen Sulfide (A4)		Thin Dark Surf	face (S9)) (LRR R	, MLRA 1	149B)	Polyvalue	Below Surface (S8) (LRR I	K , L)
Stratified Layers (A5)		High Chroma	Sands (S	611) (LRF	R K, L)		Thin Dark	Surface (S9) (LRR K, L)	
Depleted Below Dark Surface (A	11)	Loamy Mucky	Mineral	(F1) (LR I	R K, L)		Iron-Mang	ganese Masses (F12) (LRR	K, L, R)
Thick Dark Surface (A12)	·	Loamy Gleyed	Matrix (F2)	. ,		Piedmont	Floodplain Soils (F19) (ML	RA 149B
Mesic Spodic (A17)	X	Depleted Matr	ix (F3)	,			Red Pare	nt Material (F21) (outside N	/LRA 145
(MLRA 144A, 145, 149B)		Redox Dark S	urface (F	6)			Very Shal	llow Dark Surface (F22)	
Sandy Mucky Mineral (S1)		- Depleted Dark	Surface	, (F7)			Other (Ex	(plain in Remarks)	
Sandy Gleyed Matrix (S4)		Redox Depres	sions (F8	B)			``	. ,	
Sandy Redox (S5)		- Marl (F10) (LR	RRK,L)	,			³ Indicator	s of hydrophytic vegetation	and
Stripped Matrix (S6)		Red Parent Ma	aterial (F	21) (MLF	RA 145)		wetland	d hvdrology must be present	
		-	,	/ (-,		unless	disturbed or problematic.	,
Restrictive Layer (if observed): Type:									
Depth (inches):						Hydr	ic Soil Present	t? Yes X No	ı.
Remarks:									
i cinano.									

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Northcentral and See ERDC/EL TR-12-1; the proponent agency is CE	d Northeast Region ECW-CO-R	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
Project/Site: Proposed River Oaks Subdivision Property	City/County: Hudson / Su	ummit County Sampling Date: 5-15-23
Applicant/Owner: GVI, LLC		State: OH Sampling Point: DP6
Investigator(s): BDL / EW	Section, Townsh	nip, Range:
Landform (hillside, terrace, etc.): Depression Local re	elief (concave, convex, no	one): Concave Slope %: 0
Subregion (I RR or MI RA): I RR R Lat: 41 238985	long -81	468593 Datum: NAD83
Soil Map Unit Name:		NWI classification: PFO
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X	No (If no, explain in Remarks.)
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> significantly disturb	bed? Are "Normal C	Circumstances" present? Yes X No
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> naturally problema	tic? (If needed, exp	plain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	pling point location	is, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No Bemarks: (Explain alternative procedures here or in a separate report)	Is the Sampled Area within a Wetland? If yes, optional Wetland	Yes X No d Site ID: Wetland D
HYDROLOGY		
Wetland Hydrology Indicators:	Sec	condary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		Surface Soil Cracks (B6)
X Surface Water (A1) Water-Stained Leaves (B	39)	Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)		Moss Trim Lines (B16)
Saturation (A3) Mari Deposits (B15)	<u> </u>	Dry-Season Water Table (C2)
Sediment Deposits (B2) Oxidized Rhizospheres o	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) X	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)	<u>X</u>	FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes X No Depth (inches):	0.5	
Water Table Present? Yes No X Depth (inches):		
Saturation Present? Yes <u>No X</u> Depth (inches):	Wetland Hy	/drology Present? Yes X No
(includes capillary ininge) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	vious inspections) if avai	lable:
Remarks:		

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Acer saccharinum	45	Yes	FACW	
2. Ulmus americana	10	No	FACW	Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
3.				
4.				Total Number of Dominant Species Across All Strata: 3 (B)
5.				
6.				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
7.				Prevalence Index worksheet:
	55	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 15)				OBL species x 1 =
1				FACW species x 2 =
2.				FAC species x 3 =
3.				FACU species x 4 =
4				UPL species x 5 =
5.				Column Totals: (A) (B)
6.				Prevalence Index = B/A =
7.				Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 5)				X 2 - Dominance Test is >50%
1. Persicaria hydropiper	45	Yes	OBL	3 - Prevalence Index is ≤3.0 ¹
2. Carex stricta	25	Yes	OBL	4 - Morphological Adaptations ¹ (Provide supporting
3. Fraxinus pennsylvanica	5	No	FACW	data in Remarks or on a separate sheet)
4. Ulmus americana	5	No	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Lysimachia nummularia	10	No	FACW	¹ 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				Sanling/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
	90	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 30)				Woody vines – All woody vines greater than 3.28 ft in
1				height.
2				Hadron In d'a
3				Vegetation
4.				Present? Yes X No
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)			
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0-20	10YR 5/1		0YR 4/6	40		<u>M</u>	Loamy/Clayey	Prominent redox concentrations
¹ Type: C=Concen	tration, D=Deplet	ion, RM=Redu	iced Matrix, N	1S=Mask	ed Sand	Grains.	² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil Indica	ators:						Indicators	for Problematic Hydric Soils ³ :
Histosol (A1)		D	ark Surface (S7)			2 cm M	luck (A10) (LRR K, L, MLRA 149B)
Histic Epipedo	on (A2)	P	olyvalue Belo	w Surfac	e (S8) (I	.RR R,	Coast F	Prairie Redox (A16) (LRR K, L, R)
Black Histic (A	\ 3)		MLRA 149B)			5 cm M	lucky Peat or Peat (S3) (LRR K, L, R)
Hydrogen Sul	fide (A4)	T	hin Dark Surfa	ace (S9)	(LRR R,	MLRA 1	l 49B) Polyval	ue Below Surface (S8) (LRR K, L)
Stratified Laye	ers (A5)	н	igh Chroma S	Sands (S	11) (LRF	R K, L)	Thin Da	ark Surface (S9) (LRR K, L)
Depleted Belo	w Dark Surface (/	A11)L	bamy Mucky I	Mineral (F1) (LRF	R K, L)	Iron-Ma	anganese Masses (F12) (LRR K, L, R)
Thick Dark Su	irface (A12)	Lo	bamy Gleyed	Matrix (F	-2)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)
Mesic Spodic	(A17)	<u> </u>	epleted Matrix	x (F3)			Red Pa	rent Material (F21) (outside MLRA 145
(MLRA 144	IA, 145, 149B)	R	edox Dark Su	Irface (F6	6)		Very St	nallow Dark Surface (F22)
Sandy Mucky	Mineral (S1)	D	epleted Dark	Surface	(F7)		Other (Explain in Remarks)
Sandy Gleyed	Matrix (S4)	R	edox Depress	sions (F8)			
Sandy Redox	(S5)	M	larl (F10) (LR	R K, L)			³ Indicat	ors of hydrophytic vegetation and
Stripped Matri	x (S6)	R	ed Parent Ma	iterial (F2	21) (MLF	A 145)	wetla unles	nd hydrology must be present, s disturbed or problematic.
Restrictive Layer	(if observed):							
Туре:			_					
Depth (inches):						Hydric Soil Prese	ent? Yes <u>X</u> No

U.S. Army WETLAND DETERMINATION DATA See ERDC/EL TR-12-1; the	OMB Control #: 07 Requirement Con (Authority: AR 3	10-0024, Exp: 11/30/2024 ntrol Symbol EXEMPT: 35-15, paragraph 5-2a)				
Project/Site: <u>Proposed River Oaks Subdivis</u> Applicant/Owner: <u>GVI, LLC</u>	ion Property C	ity/County: <u>Hudson / Su</u>	mmit County S	Sampling Date: <u>5-15-23</u> Sampling Point: <u>DP7</u>		
Investigator(s): BDL / EW	nvestigator(s): BDL / EW Section, Towns					
Landform (hillside, terrace, etc.): Toe of slo	pe Local reli	ef (concave, convex, no	none): None Slope %: 3			
Subregion (I RR or MI RA) I RR R	Lat: 41 236535	long -81	469229	Datum NAD83		
Soil Map Unit Name:			NWI classification:	N/A		
Are climatic / hydrologic conditions on the site	e typical for this time of year?	Yes X	No (If no, ex	plain in Remarks.)		
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydro	ology <u>No</u> significantly disturbe	d? Are "Normal C	ircumstances" presen	t? Yes <u>X</u> No		
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> naturally problematic? (If needed, explain any answers in Remarks.)						
SUMMARY OF FINDINGS – Attach	site map showing sampl	ling point location	s, transects, imp	ortant features, etc.		
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes No X Yes No X Yes No X	Is the Sampled Area within a Wetland? If yes, optional Wetland	Yes Site ID:	No <u>X</u>		
HYDROLOGY						
Wetland Hydrology Indicators:		Sec	ondary Indicators (mir	nimum of two required)		
Primary Indicators (minimum of one is require	red; check all that apply)	\	Surface Soil Cracks (B6) 10)		
High Water Table (A2))	Moss Trim Linos (B16	10)		
Saturation (A2)	Aqualic Faulia (B15)		Moss Trim Lines (BT0)			
Water Marks (B1)	Hydrogen Sulfide Odor (C1		Dry-Season Water Table (C2)			
Sediment Deposits (B2)		Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)			
Drift Deposits (B3)	Presence of Reduced Iron	(C4)	Stunted or Stressed Plants (D1)			
Algal Mat or Crust (B4)	Recent Iron Reduction in T	illed Soils (C6)	Geomorphic Position	(D2)		
Iron Deposits (B5)	Thin Muck Surface (C7)		Shallow Aquitard (D3)		
Inundation Visible on Aerial Imagery (B7	 Other (Explain in Remarks))	Microtopographic Rel	ief (D4)		
Sparsely Vegetated Concave Surface (E	38)		FAC-Neutral Test (D5	5)		
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 Hy	drology Present?	Yes No X		
(includes capillary fringe)						
Describe Recorded Data (stream gauge, mo	nitoring well, aerial photos, previo	ous inspections), if avail	able:			
Remarks:						

Sampling Point: DP7

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet
1 Ulmus americana	25	Yes	FACW	Dominance rest worksheet.
	20	Ves	FACW	Number of Dominant Species
	15	Vee	EACU	
4.	15	res	FACU	Total Number of DominantSpecies Across All Strata:66(B)
5.				Demont of Deminent Oracion
6.				That Are OBL, FACW, or FAC: 50.0% (A/B)
7				Prevalence Index worksheet:
	60	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 15)				OBL species 10 x 1 = 10
1. Frangula alnus	55	Yes	FAC	FACW species45x 2 =90
2.				FAC species 65 x 3 = 195
3				FACU species 85 x 4 = 340
4				UPL species 0 x 5 = 0
5				Column Totals: 205 (A) 635 (B)
6.				Prevalence Index = B/A = 3.10
7.				Hydrophytic Vegetation Indicators:
	55	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
<u>Herb Stratum</u> (Plot size: 5)				2 - Dominance Test is >50%
1. Potentilla indica	20	Yes	FACU	3 - Prevalence Index is ≤3.0 ¹
2. Acer rubrum	5	No	FAC	4 - Morphological Adaptations ¹ (Provide supporting
3. Carex vulpinoidea	10	No	OBL	data in Remarks or on a separate sheet)
4. Poa pratensis	45	Yes	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
5 Rosa multiflora	5	No	FACU	1
6 Agrimonia parviflora	5	No	FAC	'Indicators of hydric soil and wetland hydrology must
7				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				
	90	=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: 30)				
1				Woody vines – All woody vines greater than 3.28 ft in height
2				- Holght.
3				Hydrophytic
· · · · · · · · · · · · · · · · · · ·				Vegetation Present? Yes No X
T		-Total Covor		
Pomarka: (Include photo numbero horo or on a cono				
Remarks. (include photo numbers here of on a sepa	iale sileel.)			

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(inches)	INCUL		Redo	x Featur	es			
0-8	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
00	10YR 4/2	100					Loamy/Clayey	
8-20	2.5Y 5/2	70	10YR 6/2	30	С	М	Loamy/Clayey	Faint redox concentrations
							·	
							·	
¹ Type: C=Conc	centration, D=Dep	letion, RM	=Reduced Matrix, I	MS=Mas	ked Sand	Grains.	² Location: P	L=Pore Lining, M=Matrix.
Hydric Soil Ind	licators:			(0-)			Indicators for	or Problematic Hydric Soils ³ :
Histosol (A	.1) adam (AQ)		Dark Surface	(S7)	aa (CO) (I	DD D	2 cm Mu	ICK (A10) (LRR K, L, MLRA 149B)
Histic Epipe	edon (A2)		Polyvalue Belo	ow Surfa	ce (S8) (I	_RR R,	Coast Pi	rairie Redox (A16) (LRR K, L, R)
Hydrogen (C (A3) Sulfide (A1)		Thin Dark Sur	9) face (SQ)			5 cm Mu	Below Surface (S8) (LRR K, L, R)
Stratified L	avers (A5)		High Chroma	Sands (S) (ERR R, 511) (I RF	R I)	Thin Dar	$(\mathbf{L} \mathbf{R} \mathbf{K}, \mathbf{L})$
Depleted B	Below Dark Surface	e (A11)	Loamv Muckv	Mineral	(F1) (LRF	R K. L)	Iron-Mar	nganese Masses (F12) (LRR K. L. R)
Thick Dark	Surface (A12)		Loamy Gleved	Matrix (F2)	, _)	Piedmor	nt Floodplain Soils (F19) (MLRA 149B)
Mesic Spor	dic (A17)	·	Depleted Matr	ix (F3) `	,		Red Par	ent Material (F21) (outside MLRA 145
(MLRA	144A, 145, 149B)		Redox Dark S	urface (F	6)		Very Sha	allow Dark Surface (F22)
Sandy Muc	ky Mineral (S1)		Depleted Dark	Surface	(F7)		Other (E	xplain in Remarks)
Sandy Gley	yed Matrix (S4)		Redox Depres	sions (F	8)			
Sandy Red	lox (S5)		Marl (F10) (LF	RR K, L)			³ Indicato	ors of hydrophytic vegetation and
Stripped M	atrix (S6)		Red Parent M	aterial (F	21) (MLF	RA 145)	wetlan	nd hydrology must be present,
Destrictive Lev							unless	s disturbed or problematic.
	yer (il observed):							
Depth (incl							Hydric Soil Prese	nt? Ves No X
	ies).						Hydric Soli Fresei	

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Northcentral and See ERDC/EL TR-12-1; the proponent agency is CE	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)				
Project/Site: Proposed River Oaks Subdivision Property	City/County: Hudson / S	ummit County Sampling Date: 5-17-23			
Applicant/Owner: GVI, LLC		State: OH Sampling Point: DP8			
Investigator(s): BDI / FW	Section Towns	hip Range			
Landform (billside terrace etc.): Depression Local r	elief (concave, convex, n	one): Concave Slone %: 0			
Subrogion (LPB or MLPA): LPB P					
Sublegion (LRR of MLRA). LRR R Lat. 41.234617	Longo i	NW/L close if institution: DEM			
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X	No (If no, explain in Remarks.)			
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> significantly disturb	bed? Are "Normal (Circumstances" present? Yes X No			
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> naturally problema	atic? (If needed, ex	plain any answers in Remarks.)			
SUMMARY OF FINDINGS – Attach site map showing sam	pling point location	ns, transects, important features, etc.			
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No	Is the Sampled Area within a Wetland? If yes, optional Wetlan	Yes X No d Site ID: Wetland D			
Remarks: (Explain alternative procedures here or in a separate report.)					
HYDROLOGY					
	0.	e e de mais de la contra de la co			
Primary Indicators (minimum of one is required: check all that apply)	<u>5e</u>	Surface Soil Cracks (B6)			
Surface Water (A1) Water-Stained Leaves (E	39)	Drainage Patterns (B10)			
X High Water Table (A2) Aquatic Fauna (B13)	, 	Moss Trim Lines (B16)			
X 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 c	n Living Roots (C3) Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3) Presence of Reduced Irc	on (C4) $$	Stunted or Stressed Plants (D1)			
Aigai Mai or Crusi (B4) Recent Iron Reduction in Recent Iron Reduction in Thin Muck Surface (C7)		X Geomorphic Position (D2)			
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remark		Microtopographic Relief (D4)			
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):	1.5				
Saturation Present? Yes X No Depth (inches):	1 Wetland H	ydrology Present? Yes X No			
(includes capillary fringe)		9-1-1-			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), it ava	liadie:			
Remarks:					

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1.	<u>.</u>			Number of Dominant Species
2.				That Are OBL, FACW, or FAC:(A)
3				Total Number of Dominant
4				Species Across All Strata: 2 (B)
5				Percent of Dominant Species
6		·		That Are OBL, FACW, or FAC: 100.0% (A/B)
7				Prevalence Index worksheet:
		=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 15)				OBL species x 1 =
1				FACW species x 2 =
2				FAC species x 3 =
3				FACU species x 4 =
4				UPL species x 5 =
5				Column Totals: (A)(B)
6				Prevalence Index = B/A =
7				Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 5)				X 2 - Dominance Test is >50%
1. Typha angustifolia	60	Yes	OBL	3 - Prevalence Index is ≤3.0 ¹
2. Carex lacustris	40	Yes	OBL	4 - Morphological Adaptations ¹ (Provide supporting
3				data in Remarks or on a separate sheet)
4				Problematic Hydrophytic Vegetation ¹ (Explain)
5				¹ 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				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: 30)				Woody vines – All woody vines greater than 3.28 ft in
1		·		neignt.
2				Hydrophytic
3				Vegetation
4				Present? Yes <u>X</u> No
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)			
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(inches) 0-6	• • • • • •	· · · ·	T(Cub)	x Featur	es 1			
0-6	Color (moist)	%	Color (moist)	%	Туре	Loc∠	Texture	Remarks
	10YR 3/2	100					Mucky Loam/Clay	
6-20	N 5/	85	7.5YR 5/8	15	С	М	Loamy/Clayey	
		<u> </u>						
		······································						
		······································						
	centration D=Dep	letion RM		49=Mas	ked Sand	Grains	² Location	 DI −Dore Lining M=Matrix
Hvdric Soil Ind	licators:	Guon, run		//0=1403		Graine.	Indicators	for Problematic Hydric Soils ³ :
Histosol (A	1)		Dark Surface ((S7)			2 cm M	luck (A10) (LRR K, L, MLRA 149B)
Histic Epipe	, edon (A2)	-	Polyvalue Belc	, ow Surfa	ce (S8) (I	_RR R,	Coast F	Prairie Redox (A16) (LRR K, L, R)
Black Histic	c (A3)	-	MLRA 149B	5)	•		5 cm M	ucky Peat or Peat (S3) (LRR K, L, R)
Hydrogen S	Sulfide (A4)		_Thin Dark Surf	ace (S9)) (LRR R ,	MLRA	149B) Polyval	ue Below Surface (S8) (LRR K, L)
Stratified La	ayers (A5)		High Chroma S	Sands (S	\$11) (LRF	₹ K, L)	Thin Da	ark Surface (S9) (LRR K, L)
Depleted B	elow Dark Surface	э (А11)	Loamy Mucky	Mineral	(F1) (LRF	ξ K, L)	Iron-Ma	anganese Masses (F12) (LRR K, L, R)
Thick Dark	Surface (A12)		X Loamy Gleyed	Matrix (F2)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)
Mesic Spoo	dic (A17)		Depleted Matri	x (F3)			Red Pa	rrent Material (F21) (outside MLRA 145)
(MLRA '	144A, 145, 149B)		Redox Dark St	urface (⊦	6)		Very St	nallow Dark Surface (F22)
Sandy Muc	ky Mineral (S1)	,	Depleted Dark	Surface	(F7)		Other (I	Explain in Remarks)
Sandy Giey	/ed Matrix (54)	1		SIONS (FO	3)		³ Indicat	are of hydrophytic vocatation and
Sanuy Reu Strinned M	0X (33) atrix (86)	,	IVIAII (F IU) (LR Red Parent M:	I K N, L) Notorial (F	21) (MI F	PA 145)	muica. wetla	ors or nydropnyllo vegetalion and
					21) (101-11	A 143)	unles	es disturbed or problematic
Restrictive Lay	ver (if observed):							
Туре:								
Danth (in al	ies):						Hydric Soil Prese	ent? Yes X No
Depth (Incr							,	

U.S. Army (WETLAND DETERMINATION DATA S See ERDC/EL TR-12-1; the	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)					
Project/Site: Proposed River Oaks Subdivisi Applicant/Owner: <u>GVI, LLC</u>	on Property (City/County: <u>Hudson / Su</u>	mmit County Sampling Date: <u>5-17-23</u> State: OH Sampling Point: DP9			
Investigator(s): BDL / EW		Section, Townsh	ip, Range:			
Landform (hillside, terrace, etc.): Mound	_andform (hillside, terrace, etc.): Mound Local relief (concave, convex, no					
Subregion (LRR or MLRA): LRR R	Lat: 41.234780	Long: -81.	470153 Datum: NAD83			
Soil Map Unit Name:			NWI classification: N/A			
Are climatic / hydrologic conditions on the site	typical for this time of year?	Yes X	No (If no, explain in Remarks.)			
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrol	Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> significantly disturbed? Are "Normal					
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrol	ogy <u>No</u> naturally problemat	ic? (If needed, exp	plain any answers in Remarks.)			
SUMMARY OF FINDINGS – Attach	site map showing samp	oling point location	s, transects, important features, etc.			
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: (Explain alternative procedures he	Yes X No Yes X No Yes No X re or in a separate report.)	Is the Sampled Area within a Wetland? If yes, optional Wetland	Yes <u>No X</u> I Site ID:			
HYDROLOGY						
Wetland Hydrology Indicators:		Sec	ondary Indicators (minimum of two required)			
Primary Indicators (minimum of one is require	ed; cneck all that apply)	0)	Dreinege Detterne (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 (C		Crayfish Burrows (C8)			
Sediment Deposits (B2)	Oxidized Rhizospheres or	n Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)			
Drift Deposits (B3)	Drift Deposits (B3) Presence of Reduced Iron (C4)					
Algal Mat or Crust (B4)	Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6)					
Iron Deposits (B5)	Shallow Aquitard (D3)					
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks	s)	Microtopographic Relief (D4)			
Sparsely Vegetated Concave Surface (B	8)		FAC-Neutral Test (D5)			
Field Observations:						
Surface Water Present? Yes	No X Depth (inches):					
Water Table Present? Yes	No X Depth (inches):	Wetless d.t.b.				
Saturation Present? Yes	No X Depth (Inches):	Wetland Hy	drology Present? Yes No X			
Describe Recorded Data (stream dauge mor	nitoring well aerial photos prev	/ious inspections) if avail	able:			
		nous inspections), il avai				
Remarks [.]						
Terraine.						

Trop Stratum (Plot size: 30)	Absolute % Covor	Dominant	Indicator	Dominanco Tost workshoot:
1 Acor rubrum	<u>/// Cover</u>	Voc		Dominance rest worksheet.
	45	Vee		Number of Dominant Species
2. Pinus strobus	45	<u>res</u>		$\frac{1}{2}$
3. Umus americana	10		FACW	Total Number of Dominant
4		·		Species Across All Strata: <u>3</u> (B)
5				Percent of Dominant Species
6		·		That Are OBL, FACW, or FAC: <u>66.7%</u> (A/B)
7				Prevalence Index worksheet:
	100	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 15)				OBL species x 1 =
1				FACW species x 2 =
2.				FAC species x 3 =
3		. <u> </u>		FACU species x 4 =
4				UPL species x 5 =
5				Column Totals: (A) (B)
6				Prevalence Index = B/A =
7.				Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
<u>Herb Stratum</u> (Plot size: 5)				X 2 - Dominance Test is >50%
1. Frangula alnus	10	Yes	FAC	3 - Prevalence Index is ≤3.0 ¹
2. Viburnum dentatum	2	No	FAC	4 - Morphological Adaptations ¹ (Provide supporting
3. Pinus strobus	1	No	FACU	data in Remarks or on a separate sheet)
4 Toxicodendron radicans	2	No	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
5 Fravinus nennsylvanica	2	No	FACW	
6	2	110	1700	¹ Indicators of hydric soil and wetland hydrology must
7				Definitions of Vagetation Strate:
· · · · · · · · · · · · · · · · · · ·				Deminions of Vegetation Strata.
o		·		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
	17	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 30)				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 separ	ate sheet.)			
				Northcentral and Northeast Vorcion 2.0

SOIL

(inchos)	Color (maint)	0/	Color (maint)	۸ i Catul ۵/	Tur - 1	1.0-2	Tout		Democrit	
(inches)	Color (moist)	%	Color (moist)	%	Туре	LOC	Texture		Remark	S
0-10	2.5Y 5/2	95	2.5YR 4/8	5	С	Μ	Loamy/Clayey	Promi	nent redox co	oncentrations
10-20	2.5Y 6/1	75	2.5YR 5/8	25	<u> </u>	M	Loamy/Clayey	Promi	nent redox co	oncentrations
1					_	_	2			
'Type: C=Cor	ncentration, D=Depl	etion, RN	1=Reduced Matrix, N	/IS=Mas	ked Sand	d Grains.	² Location: F	PL=Pore Li	ning, M=Mat	rix. Soilo ³ i
Histosol (Histic Epi Black His	A1) pedon (A2) tic (A3)		Dark Surface (Polyvalue Belo MLRA 149B	S7) w Surfa	ce (S8) (LRR R,	2 cm Mu Coast P 5 cm Mu	uck (A10) rairie Red uckv Peat	(LRR K, L, M ox (A16) (LR or Peat (S3)	ILRA 149B) R K, L, R) (LRR K, L, R)
Hydrogen	Sulfide (A4)		Thin Dark Surf	, ace (S9) (LRR R	, MLRA 1	I49B) Polyvalu	ue Below S	Surface (S8) ((LRR K, L)
Stratified	Layers (A5)		High Chroma	Sands (S	611) (LRI	R K, L)	Thin Da	rk Surface	(S9) (LRR K	K, L)
Depleted	Below Dark Surface	(A11)	Loamy Mucky	Mineral	(F1) (LR	R K, L)	Iron-Mai	nganese N	lasses (F12)	(LRR K, L, R)
Thick Dar	k Surface (A12)		Loamy Gleyed	Matrix (F2)		Piedmoi Bod Dor	nt Floodpla	ain Soils (F19) (MLRA 1498) aida MLBA 146
Mesic Spodic (A17) X Depleted Matrix (F3)					Red Parent Material (F21) (Outside MLRA 145					
Sandy Mu	ucky Mineral (S1)		Depleted Dark	Surface (i	e (F7)		Other (E	Explain in F	Remarks)	2)
Sandy Gl	eyed Matrix (S4)		Redox Depres	sions (F	8)				,	
Sandy Re	edox (S5)		Marl (F10) (LR	R K, L)			³ Indicato	ors of hydr	ophytic vege	tation and
Stripped I	Matrix (S6)		Red Parent Ma	aterial (F	21) (MLF	RA 145)	wetlar unless	nd hydrolo s disturbeo	gy must be p d or problema	resent, atic.
Restrictive La Type:	ayer (if observed):									
Depth (in	ches):						Hydric Soil Prese	nt?	Yes X	No
Remarks:							_			

U.S. Army (WETLAND DETERMINATION DATA See ERDC/EL TR-12-1; the	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)					
Project/Site: Proposed River Oaks Subdivisi	on Property	City/County: Hudson / Su	mmit County Sampling Date: 5-17-23			
Applicant/Owner: GVI. LLC			State: OH Sampling Point: DP10			
Investigator(s): BDI / FW		Section Townsh	in Range:			
Landform (hilloide terrace etc.)						
Landiorm (niliside, terrace, etc.): Mound		eller (concave, convex, no	Siope %: 0			
Subregion (LRR or MLRA): LRR R	Lat: <u>41.234780</u>	Long: <u>-81</u> .	470153 Datum: NAD83			
Soil Map Unit Name:			NWI classification: N/A			
Are climatic / hydrologic conditions on the site	typical for this time of year?	Yes X	No (If no, explain in Remarks.)			
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydro	ogy <u>No</u> significantly disturb	bed? Are "Normal C	ircumstances" present? Yes X No			
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrol	ogy <u>No</u> naturally problema	tic? (If needed, exp	plain any answers in Remarks.)			
SUMMARY OF FINDINGS – Attach	site map showing sam	pling point location	s, transects, important features, etc.			
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes No X	Is the Sampled Area within a Wetland? If yes, optional Wetland	Yes <u>No X</u> Site ID:			
Remarks: (Explain alternative procedures he	ere or in a separate report.)					
HYDROLOGY						
Wetland Hydrology Indicators:		Sec	ondary Indicators (minimum of two required)			
Primary Indicators (minimum of one is require	Surface Soil Cracks (B6)					
High Water Table (A2)	Aquatic Fauna (B13)	Drainage Patterns (B10) 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 o	on Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)			
Drift Deposits (B3)	Deposits (B3) Presence of Reduced Iron (C4)					
Algal Mat or Crust (B4)	Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6)					
Iron Deposits (B5)		Shallow Aquitard (D3)				
Inundation Visible on Aerial Imagery (B7	Microtopographic Relief (D4)					
Sparsely Vegetated Concave Surface (B	8)		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 Hy	drology Present? Yes <u>No X</u>			
(includes capillary fringe)	nitoring well periol photos pro	vious inspections) if quait	able.			
Describe recorded Data (stream gauge, mol	moning wen, aenai priotos, pre	anous inspections), il avail	abic.			
Pomarka:						
Trop Stratum (Plot size: 30)	Absolute	Dominant	Indicator	Dominance Test worksheet:		
--	-------------	--------------	-----------	--		
1 Acor rubrum	<u>40</u>	Vos		Dominance rest worksheet.		
	20	No		Number of Dominant Species		
2. Dinus americana	20	<u> </u>		$\frac{1}{1}$		
S. Philos strobus				Total Number of Dominant		
4. Prunus serotina	10	INO	FACU	Species Across All Strata: 6 (B)		
5 6				Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)		
7.				Prevalence Index worksheet:		
	105	=Total Cover		Total % Cover of: Multiply by:		
Sapling/Shrub Stratum (Plot size: 15)				OBL species x 1 =		
1. Frangula alnus	15	Yes	FAC	FACW species x 2 =		
2. Prunus serotina	5	Yes	FACU	FAC species x 3 =		
3.				FACU species x 4 =		
4				UPL species x 5 =		
5.				Column Totals: (A) (B)		
6.				Prevalence Index = B/A =		
7.				Hydrophytic Vegetation Indicators:		
	20	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation		
Herb Stratum (Plot size: 5)				X 2 - Dominance Test is >50%		
1. Fraxinus pennsylvanica	10	Yes	FACW	3 - Prevalence Index is ≤3.0 ¹		
2. Impatiens capensis	1	No	FACW	4 - Morphological Adaptations ¹ (Provide supporting		
3. Toxicodendron radicans	5	Yes	FAC	data in Remarks or on a separate sheet)		
4.				Problematic Hydrophytic Vegetation ¹ (Explain)		
5.				¹ 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				Sanling/shruh – 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		
	16	=Total Cover		of size, and woody plants less than 3.28 ft tall.		
Woody Vine Stratum (Plot size: 30)				Woody vines – 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	ate sheet.)					
ENG FORM 6116-8, JUL 2018				Northcentral and Northeast – Version 2.0		

Depth Matrix	•	Redo	x Featur	es			
(inches) Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-5 10YR 3/2	100					Loamy/Clayey	
5-20 10YR 6/1	80	2.5YR 4/8	20	С	М	Loamy/Clayey	Prominent redox concentrations
			_	_			
¹ Type: C=Concentration, D=Deplet	tion, RM	=Reduced Matrix, N	//S=Mas	ked Sand	Grains.	² Location: PL=	Pore Lining, M=Matrix.
Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) X Depleted Below Dark Surface (Thick Dark Surface (A12) Mesic Spodic (A17) (MLRA 144A, 145, 149B) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6)	A11)	Dark Surface (Polyvalue Belo MLRA 149B Thin Dark Surf High Chroma S Loamy Mucky Loamy Gleyed X Depleted Matr Redox Dark Su Depleted Dark Redox Depres Marl (F10) (LR Red Parent Ma	(S7) bw Surfac (S9) Sands (S Mineral (Matrix (Matrix (ix (F3) urface (F Surface sions (F R K, L) aterial (F	ce (S8) ((LRR R 611) (LRF (F1) (LRF (F1) (LRF 52) (F7) 8) 21) (MLF	_RR R, MLRA 1 R K, L) R K, L) R K, L)	Indicators for 2 cm Muck Coast Prain 5 cm Muck Polyvalue I Thin Dark S Iron-Manga Piedmont F Red Paren Very Shalld Other (Exp ³ Indicators wetland unless d	Problematic Hydric Soils ³ : (A10) (LRR K, L, MLRA 149B) rie Redox (A16) (LRR K, L, R) ry Peat or Peat (S3) (LRR K, L, R) Below Surface (S8) (LRR K, L) Surface (S9) (LRR K, L) anese Masses (F12) (LRR K, L, R) Floodplain Soils (F19) (MLRA 149B t Material (F21) (outside MLRA 14: bw Dark Surface (F22) lain in Remarks) of hydrophytic vegetation and hydrology must be present, isturbed or problematic.
Type:						Hvdric Soil Present?	? Yes X No
Remarks:						-	

Project/Site: Proposed River Oaks Subdivision Property City/County: Hudson / Summit County Sampling Date: 5-18-23 Applicant/Owner: GVI, LLC State: OH Sampling Point: DP1 Investigator(s): BDL / EW Section, Township, Range:
Applicant/Owner: GVI, LLC State: OH Sampling Point: DP1 Investigator(s): BDL / EW Section, Township, Range:
Investigator(s): BDL / EW Section, Township, Range: Landform (hillside, terrace, etc.): Hill side Local relief (concave, convex, none): None Slope %: 3 Subregion (LRR or MLRA): LRR R Lat: 41.239751 Long: -81.475127 Datum: NAD83 Soil Map Unit Name: NWI classification:
Landform (hillside, terrace, etc.): Hill side Local relief (concave, convex, none): None Slope %: 3 Subregion (LRR or MLRA): LRR R Lat: 41.239751 Long: -81.475127 Datum: NAD83 Soil Map Unit Name:
Subregion (LRR or MLRA): LRR R Lat: 41.239751 Long: -81.475127 Datum: NAD83 Soil Map Unit Name:
Subregion (LRR or MLRA): LRR R Lat: 41.239751 Long: -81.475127 Datum: NAD83 Soil Map Unit Name:
Soil Map Unit Name: 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 <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> significantly disturbed? Are "Normal Circumstances" present? Yes <u>X</u> No
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> naturally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc
Hydrophylic Vegetation Present? Fes A No Is the Sampled Area
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 (B9) Drainage Patterns (B10)
Aqualic Faulia (B15) Moss Thill Lifes (B16) Moss Thill Lifes (B16) Moss Thill Lifes (B16) Moss Thill Lifes (B16)
Water Marks (B1) Hvdrogen Sulfide Odor (C1) Cravitish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Wrater Marks (B1) Injurgen Guinde Cool (G1) Endyrich Burrows (C0) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (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 Remarks) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (B8) FAC-Neutral Test (D5)
Wrater marks (b1) Injurgen outlide outli
Wrater marks (b1) Injurgen ounde cool (c1) Injurgen ounde cool (c1) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (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 Remarks) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (B8) FAC-Neutral Test (D5) Fac-Neutral Test (D5) Field Observations: Surface Water Present? Yes No X Depth (inches):
Writer Marke (B1) Injurgen outlide Ober (B1) Injurgen outlide Ober (B1) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (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 Remarks) 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):
Writer marks (b1) Injurgen ounde out (c1) Injurgen ounde out (c1) Injurgen ounde out (c1) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (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 Remarks) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (B8) FAC-Neutral Test (D5) Fac-Neutral Test (D5) Field Observations: No X Depth (inches): Wetland Hydrology Present? Yes No X Saturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes No X
Index math (cf) Index game (cf)

Trop Stratum (Plat aize: 20)	Absolute	Dominant	Indicator	Dominance Test workshoet
1 Ulmus amoricana	35	Species?		Dominance rest worksneet.
		Vee		Number of Dominant Species
2. Acer saccharum		<u>res</u>		That are OBL, FACW, of FAC. 4 (A)
3. Pinus strobus				Total Number of Dominant
	40	res	FAC	Species Across All Strata. <u>6</u> (B)
5 6.				Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)
7.				Prevalence Index worksheet:
	130	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 15)				OBL species x 1 =
1.				FACW species x 2 =
2.				FAC species x 3 =
3.				FACU species x 4 =
4.				UPL species x 5 =
5.				Column Totals: (A) (B)
6.				Prevalence Index = B/A =
7.				Hydrophytic Vegetation Indicators:
		=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
<u>Herb Stratum</u> (Plot size: 5)				X 2 - Dominance Test is >50%
1. Alliaria petiolata	2	No	FACU	3 - Prevalence Index is ≤3.0 ¹
2. Toxicodendron radicans	10	Yes	FAC	4 - Morphological Adaptations ¹ (Provide supporting
3. Rosa multiflora	2	No	FACU	data in Remarks or on a separate sheet)
4. Fraxinus pennsylvanica	10	Yes	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
5. Geum canadense	5	No	FAC	¹ Indiastors of hydric soil and watland 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				Herb – All herbaceous (non-woody) plants, regardless
	29	= I otal Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 30)			5.011	Woody vines – All woody vines greater than 3.28 ft in
1. Vitis aestivalis	20	Yes	FACU	height.
2.				Hydrophytic
3.				Vegetation
4.				Present? Yes X No
	20	=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)			

Profile Dese	Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix		Redo	x Featur	es					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-10	10YR 5/3	95	10YR 4/4	5	С	М	Loamy/Clayey	Faint redox concentrations		
10-20	2.5Y 6/1	85	5YR 5/8	15	С	M	Loamy/Clayey	Prominent redox concentrations		
						·······				
						·······				
	·									
¹ Type: C=C	oncentration, D=Dep	letion, RN	I=Reduced Matrix, N	//S=Mas	ked Sand	d Grains.	² Location:	PL=Pore Lining, M=Matrix.		
Hydric Soil	Indicators:			(07)			Indicators	for Problematic Hydric Soils ³ :		
Histosol	(A1)		Dark Surface (S7)	(00) (2 cm M	luck (A10) (LRR K, L, MLRA 149B)		
	pipedon (A2)		Polyvalue Belo	ow Surfa	ce (S8) (I	LRR R,	Coast H	Prairie Redox (A16) (LRR K, L, R)		
Black Hi	istic (A3)		MLRA 149B	5) - (00)			5 cm M	lucky Peat or Peat (S3) (LRR K, L, R)		
Hydroge	en Sulfide (A4)		Thin Dark Surf	ace (S9)) (LRR R	, MLRA [,]	149B) Polyval	ue Below Surface (S8) (LRR K, L)		
Stratified	d Layers (A5)	<i></i>	High Chroma	Sands (S	511) (LRF	R K, L)	I hin Dark Surface (S9) (LRR K, L)			
Deplete	d Below Dark Surface	e (A11)	Loamy Mucky	Mineral	(⊢1) (LR I	R K, L)	Iron-Manganese Masses (F12) (LRR K, L, R)			
I hick Da	ark Surface (A12)		Loamy Gleyed	Matrix (F2)		Piedmont Floodplain Soils (F19) (MLRA 149B)			
Mesic S	podic (A17)		Depleted Matri	ix (F3)			Red Parent Material (F21) (outside MLRA 14)			
(MLR	(A 144A, 145, 149B)		Redox Dark Su	urface (F	·6)		Very Shallow Dark Surface (F22)			
Sandy N	/lucky Mineral (S1)		Depleted Dark	Surface	(F7)		Other (Explain in Remarks)		
Sandy G	Gleyed Matrix (S4)		Redox Depres	sions (F8	8)		2			
Sandy F	Redox (S5)		Marl (F10) (LR	R K, L)			"Indicators of hydrophytic vegetation and			
Stripped	l Matrix (S6)		Red Parent Ma	aterial (F	21) (MLF	RA 145)	wetland hydrology must be present,			
Destrictive							unles	ss disturbed or problematic.		
Type.	Layer (II observed):									
Denth (i	nches).						Hydric Soil Prese	ent? Yes No X		
							Thyane boint rese			
Remarks:										

U.S. Army Co WETLAND DETERMINATION DATA SH See ERDC/EL TR-12-1; the p	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)				
Project/Site: Proposed River Oaks Subdivision	n Property Cit	ty/County: <u>Hudson / Su</u>	mmit County Sampling Date: 5-18-23		
Applicant/Owner: GVI, LLC			State: OH Sampling Point: DP12		
Investigator(s): BDL / EW		Section, Townsh	ip, Range:		
Landform (hillside, terrace, etc.): Plain	Local relie	ef (concave, convex, no	ne): None Slope %: 0		
Subregion (LRR or MLRA): LRR R	Lat: 41 239921	Long -81	471262 Datum: NAD83		
Soil Map Unit Name:		201901.	NWI classification: N/A		
Are elimetic / hydrologic conditions on the site to	reised for this time of year?	Voc V	No. (If no. ovnlein in Romarka)		
Are climatic / hydrologic conditions on the site ty					
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrolog	gy No significantly disturbed	I? Are "Normal C	ircumstances" present? Yes X No		
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrolog	gy <u>No</u> naturally problematic?	? (If needed, exp	lain any answers in Remarks.)		
SUMMARY OF FINDINGS – Attach si	ite map showing sampli	ing point location	s, transects, important features, etc.		
Hydrophytic Vegetation Present? Y Hydric Soil Present? Y Wetland Hydrology Present? Y Demodeus (Eventsia alternative accordures to the second seco	es X No I es X No V es No X I	Is the Sampled Area within a Wetland? If yes, optional Wetland	Yes <u>No X</u> Site ID:		
HYDROLOGY					
Wetland Hydrology Indicators:		Sec	ondary Indicators (minimum of two required)		
Primary Indicators (minimum of one is required	; check all that apply)		Surface Soll Cracks (B6)		
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 on L	_iving Roots (C3)	Saturation Visible on Aerial Imagery (C9)		
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)		
Algal Mat or Crust (B4)	Recent Iron Reduction in Til	lled Soils (C6)	Geomorphic Position (D2)		
Iron Deposits (B5)	Thin Muck Surface (C7)		Shallow Aquitard (D3)		
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)		Microtopographic Relief (D4)		
Sparsely Vegetated Concave Surface (B8)			FAC-Neutral Test (D5)		
Field Observations:					
Surface Water Present? Yes	No X Depth (inches):				
Saturation Present? Ves	No X Depth (inches):	 Wetland Hy	drology Present? Yes No X		
(includes capillary fringe)		Wettand Hy			
Describe Recorded Data (stream gauge, monit	oring well, aerial photos, previo	us inspections), if avail	able:		
Remarks:					

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet
1 Pinus strobus	40	Yes	FACU	
2 Ouercus nalustris	30	Ves	FACW	Number of Dominant Species
	20	No		
S. Onnus americana	20			Total Number of Dominant
	25	res	FAC	Species Across All Strata. / (B)
5. 6.		·		Percent of Dominant Species That Are OBL, FACW, or FAC: <u>57.1%</u> (A/B)
7				Prevalence Index worksheet:
	115	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 15)		-		OBL species 0 x 1 = 0
1. Frangula alnus	20	Yes	FAC	FACW species 52 x 2 = 104
2				FAC species 56 x 3 = 168
3.				FACU species 65 x 4 = 260
4.				UPL species 0 x 5 = 0
5.				Column Totals: 173 (A) 532 (B)
6.		·		Prevalence Index = B/A = 3.08
7.				Hydrophytic Vegetation Indicators:
	20	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 5)		• • • • • • • • • • • • •		X 2 - Dominance Test is >50%
1 Toxicodendron radicans	10	Yes	FAC	$3 - Prevalence Index is \leq 30^{1}$
2 Parthenocissus quinquefolia	15	Yes	FACU	4 - Morphological Adaptations ¹ (Provide supporting
3 Viburnum dentatum	1	<u> </u>	FAC	data in Remarks or on a separate sheet)
A Potentilla simplex	10	Ves	FACU	Problematic Hydrophytic Vegetation ¹ (Evplain)
	2	No		
	2		FACW	¹ Indicators of hydric soil and wetland hydrology must
7		·		Definitions of Vagetation Strate:
		·		Definitions of Vegetation Strata.
0		·		Tree – Woody plants 3 in. (7.6 cm) or more in
9		·		diameter at breast neight (DDT), regardless of height.
11		·		Sapling/shrub – Woody plants less than 3 in. DBH
10		·		and greater than of equal to 3.26 it (1 iii) tail.
12.		-Tatal Causa		Herb – All herbaceous (non-woody) plants, regardless
	- 38	= I otal Cover		of size, and woody plants less than 3.28 it tall.
<u>woody vine Stratum</u> (Plot size. <u>30</u>)				Woody vines – All woody vines greater than 3.28 ft in
1		·		neight.
2				Hydrophytic
3		·		Vegetation
4.		·		Present? Yes <u>X</u> No
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)			

/	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks	
0-15	10YR 4/1	98	10YR 4/4	2	С	М	Loamy/Clayey Distinct redox concer	trations
15-20	2.5Y 6/1	75	5YR 5/8	25	С	М	Loamy/Clayey Prominent redox conce	entrations
		_						
	econtration D=Dan	ation DM	-Doduced Matrix N			Craina	² Leastian: DL-Dara Lining M-Matrix	
lydric Soil In	dicators:			10-11185	keu Sanu	Grains.	Indicators for Problematic Hydric So	oils ^{3.}
Histosol (A	A1)		Dark Surface (S7)			2 cm Muck (A10) (LRR K, L, MLR	A 149B)
Histic Epip	, pedon (A2)		Polyvalue Belo	, w Surfa	ce (S8) (I	.RR R,	Coast Prairie Redox (A16) (LRR K	, L, R)
Black Hist	ic (A3)		MLRA 149B)	. , .		5 cm Mucky Peat or Peat (S3) (LR	R K, L, R)
Hydrogen	Sulfide (A4)		Thin Dark Surf	ace (S9)) (LRR R,	MLRA 1	149B) Polyvalue Below Surface (S8) (LRI	R K, L)
Stratified I	_ayers (A5)		High Chroma S	Sands (S	611) (LRF	R K, L)	Thin Dark Surface (S9) (LRR K, L)	1
Depleted I	Below Dark Surface	e (A11)	Loamy Mucky	Mineral	(F1) (LRF	R K, L)	Iron-Manganese Masses (F12) (LR	RR K, L, R)
Thick Darl	k Surface (A12)		Loamy Gleyed	Matrix (F2)		Piedmont Floodplain Soils (F19) (N	ILRA 149E
Mesic Spo	odic (A17)		X Depleted Matri	x (F3)			Red Parent Material (F21) (outside	e MLRA 14
(MLRA	144A, 145, 149B)		Redox Dark Su	urface (F	6)		Very Shallow Dark Surface (F22)	
Sandy Mu	cky Mineral (S1)		Depleted Dark	Surface	(F7)		Other (Explain in Remarks)	
Sandy Gle	eyed Matrix (S4)		Redox Depres	sions (F8	B)			
Sandy Re	dox (S5)		Marl (F10) (LR	R K, L)			³ Indicators of hydrophytic vegetatic	on and
Stripped N	/atrix (S6)		Red Parent Ma	aterial (F	21) (MLF	RA 145)	wetland hydrology must be prese unless disturbed or problematic.	ent,
Restrictive La	ayer (if observed):							
Туре:								
Depth (inc	hes):						Hydric Soil Present? Yes X	No

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Northcentral and See ERDC/EL TR-12-1; the proponent agency is CE	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)			
Project/Site: Proposed River Oaks Subdivision Property	City/County: Hudson / S	Summit County Sampling Date: 5-18-23		
Applicant/Owner: GVI, LLC		State: OH Sampling Point: DP13		
Investigator(s): BDL / EW	Section, Towns	ship, Range:		
Landform (hillside, terrace, etc.): Depression Local re	elief (concave, convex, r	none): Concave Slope %: 0		
Subregion (LRR or MLRA): LRR R Lat: 41 238538	Long -8	1 475027 Datum: NAD83		
Soil Map Unit Name:	20.1gi _0	NWI classification: PFO		
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X	No (If no, explain in Remarks.)		
Are Vegetation No , Soil No , or Hydrology No significantly disturb	bed? Are "Normal	Circumstances" present? Yes X No		
Are Vegetation No , Soil No , or Hydrology No naturally problemat	tic? (If needed, e	xplain any answers in Remarks.)		
SUMMARY OF FINDINGS – Attach site map showing same	pling point locatio	ns, transects, important features, etc.		
		···; ·····; ····; ····;		
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area	No. N.		
Hydric Soll Present? Yes X No Wetland Hydrology Present? Yes X No	If yes, optional Wetlard?	Yes X NO		
Remarks: (Evolution alternative procedures here or in a separate report.)				
HYDROLOGY				
Wetland Hydrology Indicators:	Se	econdary 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 (B	39)	Drainage Patterns (B10)		
X High Water Table (A2) Aquatic Fauna (B13)		Moss Trim Lines (B16)		
X Saturation (A3) Marl Deposits (B15)		Dry-Season Water Table (C2)		
Water Marks (B1) Hydrogen Sulfide Odor (C	C1)	Crayfish Burrows (C8)		
Sediment Deposits (B2) Oxidized Rhizospheres o	IVING ROOTS (C3)	Saturation Visible on Aerial Imagery (C9)		
Drill Deposits (B3) Presence of Reduced fro	Tilled Seile (C6)	Stunted or Stressed Plants (DT)		
Iron Deposits (B5)		Shallow Aquitard (D3)		
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remark	(s)	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 X No Depth (inches):	12			
Saturation Present? Yes X No Depth (inches):	11 Wetland H	lydrology Present? Yes X No		
(includes capillary fringe)				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	vious inspections), if ava	ailable:		
Remarks:				

	Absolute	Dominant	Indicator	
<u>Tree Stratum</u> (Plot size: <u>30</u>)	% Cover	Species?	Status	Dominance Test worksheet:
1. Ulmus americana	35	Yes	FACW	Number of Dominant Species
2. Quercus palustris	30	Yes	FACW	That Are OBL, FACW, or FAC: 6 (A)
 Acer rubrum 4. 	20	Yes	FAC	Total Number of Dominant Species Across All Strata: 6 (B)
5				Percent of Dominant Species That Are OBL. FACW. or FAC: 100.0% (A/B)
7				Prevalence Index worksheet:
	85	=Total Cover		Total % Cover of Multiply by
Sapling/Shrub Stratum (Plot size: 15)				OBL species x1 =
1. Frangula alnus	5	Yes	FAC	FACW species x 2 =
2.				FAC species x 3 =
3.				FACU species x 4 =
4.				UPL species x 5 =
5.				Column Totals: (A) (B)
6				Prevalence Index = B/A =
7				Hydrophytic Vegetation Indicators:
	5	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 5)	0			X 2 - Dominance Test is >50%
1 Francula alnus	10	Ves	FAC	$\frac{1}{2}$ = Dominance results > 00 //
	2	No		4 - Morphological Adaptations ¹ (Provide supporting
2. Fraxinus pennsylvanica		 		data in Remarks or on a separate sheet)
3. Carex vuipinoidea	10	Yes	OBL	Problem stic Underschafte Manstein 1 (Fordation)
4				Problematic Hydrophytic Vegetation (Explain)
5.				¹ 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				Herb – All herbaceous (non-woody) plants, regardless
	23	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 30)				Woody vines – All woody vines greater than 3.28 ft in
1				height.
2				Hudrophytic
3				Vegetation
4				Present? Yes X No
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)	-		
ENC FORM 6446 9 111 2049				Northcontrol and Northcost Version 2.0

0-12 10YR 3/2 90 2.5YR 3/6 10 C M Loamy/Clayey Prominent redox cond 12-20 2.5Y 4/1 90 5YR 4/6 10 C M Loamy/Clayey Prominent redox cond 12-20 2.5Y 4/1 90 5YR 4/6 10 C M Loamy/Clayey Prominent redox cond 12-20 2.5Y 4/1 90 5YR 4/6 10 C M Loamy/Clayey Prominent redox cond 12-20 2.5Y 4/1 90 5YR 4/6 10 C M Loamy/Clayey Prominent redox cond 12-20 2.5Y 4/1 90 5YR 4/6 10 C M Loamy/Clayey Prominent redox cond 12-20 10
12-20 2.5Y 4/1 90 5YR 4/6 10 C M Loamy/Clayey Prominent redox conc Image: Second se
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Histosol (A1) Dark Surface (S7) Indicators for Problematic Hydric S Histosol (A1) Dark Surface (S7) 2 com Muck (A10) (LRR K, L, MLR Histosol (A2) Polyvalue Below Surface (S8) (LRR R, Black Histic (A3) MLRA 149B)
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Histosol (A1) Dark Surface (S7) Black Histic (A3) MLRA 149B)
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. tydric Soil Indicators: Indicators for Problematic Hydric S Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (LRR R, Black Histic (A3) MILRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR Pairie)
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Indicators for Problematic Hydric S Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (LRR K, L, MLR Histic Epipedon (A2) Polyvalue Below Surface (S8) (LRR R, Coast Prairie Redox (A16) (LRR K, L, MLR Black Histic (A3) MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LR
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. lydric Soil Indicators: Indicators for Problematic Hydric S
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. tydric Soil Indicators: Indicators for Problematic Hydric S Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (LRR K, L, MLR Histic Epipedon (A2) Polyvalue Below Surface (S8) (LRR R, Coast Prairie Redox (A16) (LRR K Black Histic (A3) MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LR
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Indicators for Problematic Hydric S Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (LRR K, L, MLR Histic Epipedon (A2) Polyvalue Below Surface (S8) (LRR R, Coast Prairie Redox (A16) (LRR K Black Histic (A3) MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LR
Hydric Soil Indicators: Indicators for Problematic Hydric S Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (LRR K, L, MLR Histic Epipedon (A2) Polyvalue Below Surface (S8) (LRR R, Coast Prairie Redox (A16) (LRR K Black Histic (A3) MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LR
Histor Hallor (HS) Thin Dark Surface (S9) (LRR R, MLRA 149B) Polyvalue Below Surface (S8) (LR K, L) Stratified Layers (A5) High Chroma Sands (S11) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) X Depleted Below Dark Surface (A11) Loamy Mucky Mineral (F1) (LRR K, L) Iron-Manganese Masses (F12) (L Mesic Spodic (A17) Depleted Matrix (F2) Piedmont Floodplain Soils (F19) (Mesic Spodic (A17) Depleted Dark Surface (F6) Very Shallow Dark Surface (F22) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Other (Explain in Remarks) Sandy Redox (S5) Marl (F10) (LRR K, L) 3Indicators of hydrophytic vegetati wetland hydrology must be presumes disturbed or problematic Restrictive Layer (if observed): Type: Ponth (inshap): Yes
Depth (inches): Hydric Soil Present? Yes X Remarks:

U.S. Army Con WETLAND DETERMINATION DATA SHI See ERDC/EL TR-12-1; the pr	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)				
Project/Site: Proposed River Oaks Subdivision I	Property	City/County: Hudson / Si	ummit County Sampling Date: 5-18-23		
Applicant/Owner: GVI. LLC		· · · _	State: OH Sampling Point: DP14		
Investigator(s): BDI / EW		Section Townsh			
Landform (billoide, torrage, etc.): Blain	l oool r		ano): Nano Slono %: 0		
		eller (concave, convex, no			
Subregion (LRR or MLRA): LRR R	Lat: 41.238/41	Long: <u>-81</u>	.475060 Datum: NAD83		
Soil Map Unit Name:			NWI classification: N/A		
Are climatic / hydrologic conditions on the site typ	bical for this time of year?	Yes X	No (If no, explain in Remarks.)		
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology	<u>No</u> significantly disturb No	ed? Are "Normal C	Circumstances" present? Yes X No		
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology	/ <u>No</u> naturally problema	tic? (If needed, ex	plain any answers in Remarks.)		
SUMMARY OF FINDINGS – Attach sit	e map showing sam	pling point locatior	ns, transects, important features, etc.		
Hydrophytic Vegetation Present?YeHydric Soil Present?YeWetland Hydrology Present?Ye	sNoX sNoX sNoX	Is the Sampled Area within a Wetland? If yes, optional Wetland	Yes <u>No X</u> d Site ID:		
		0.			
Wetland Hydrology Indicators:	check all that apply)	500	Surface Soil Cracks (B6)		
Surface Water (A1)	Water-Stained Leaves (F	(9)	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 o	n Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)		
Drift Deposits (B3)	Presence of Reduced Iro	n (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 Sufface (C7)		Shallow Aquitard (D3)		
		<u> </u>	AC-Neutral Test (D5)		
Eigld Observations:					
Surface Water Present? Yes N	o X Denth (inches) [.]				
Water Table Present? Yes No	o X Depth (inches):				
Saturation Present? Yes No	o X Depth (inches):	Wetland Hy	/drology Present? Yes No X		
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitor	ring well, aerial photos, pre	vious inspections), if avai	lable:		
Remarks:					

<u>Tree Stratum</u> (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Pinus strobus	90	Yes	FACU	Number of Dominant Spacing
2. Acer rubrum	20	No	FAC	That Are OBL, FACW, or FAC: 2 (A)
3.				Total Number of Dominant
4.				Species Across All Strata: 4 (B)
5.				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 50.0% (A/B)
7.				Prevalence Index worksheet:
	110	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 15)				OBL species x 1 =
1. Frangula alnus	10	Yes	FAC	FACW species 0 x 2 = 0
2				FAC species 46 x 3 =138
3				FACU species 100 x 4 = 400
4				UPL species 0 x 5 = 0
5				Column Totals: 146 (A) 538 (B)
6				Prevalence Index = B/A = 3.68
7				Hydrophytic Vegetation Indicators:
	10	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 5)				2 - Dominance Test is >50%
1. Viburnum dentatum	1	No	FAC	3 - Prevalence Index is ≤3.0 ¹
2. Toxicodendron radicans	10	Yes	FAC	4 - Morphological Adaptations ¹ (Provide supporting
3. Frangula alnus	5	No	FAC	data in Remarks or on a separate sheet)
4. Parthenocissus quinquefolia	10	Yes	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
5				¹ 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				Herb – All herbaceous (non-woody) plants, regardless
	26	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 30)				Woody vines – All woody vines greater than 3.28 ft in
1				height.
2				
3				Vegetation
4				Present? Yes No X
		=Total Cover		
Remarks: (Include photo numbers here or on a sepa	arate sheet.)			
ENG FORM 6116-8. JUL 2018				Northcentral and Northeast – Version 2.0

Depth	Matrix		Redo	x Featur	es					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-15	10YR 4/3	100					Loamy/Clayey			
15-20	2.5Y 5/1	80	7.5YR 5/8	20	С	М	Loamy/Clayey	Prominent redox concentrations		
¹ Type: C=Cc			=Reduced Matrix. I	 MS=Mas	ked Sand			PL=Pore Lining. M=Matrix.		
Hydric Soil	ndicators:						Indicators for	or Problematic Hydric Soils ³ :		
Histosol Histic Ep Black His Hydroge Stratified	(A1) ipedon (A2) stic (A3) n Sulfide (A4) I Layers (A5) I Below Dark Surface	e (A11)	Dark Surface (Polyvalue Bek MLRA 149E Thin Dark Surf High Chroma S Loamy Mucky	(S7) ow Surfa 3) face (S9) Sands (S Mineral	ce (S8) () (LRR R 511) (LRI (F1) (LR I	LRR R, , MLRA ² R K, L) R K, L)	2 cm Mu Coast Pi 5 cm Mu 149B) Polyvalu Thin Dar Iron-Mar	uck (A10) (LRR K, L, MLRA 149B) rairie Redox (A16) (LRR K, L, R) ucky Peat or Peat (S3) (LRR K, L, R) ie Below Surface (S8) (LRR K, L) rk Surface (S9) (LRR K, L) nganese Masses (F12) (LRR K, L, R)		
Thick Da Mesic Sp (MLR	rk Surface (A12) podic (A17) A 144A, 145, 149B)	•	Loamy Gleyed Depleted Matr Redox Dark S	l Matrix (ix (F3) urface (F	F2)		Piedmont Floodplain Soils (F19) (MLRA 149 Red Parent Material (F21) (outside MLRA 1 4 Very Shallow Dark Surface (F22)			
Sandy M Sandy G Sandy R	ucky Mineral (S1) leyed Matrix (S4) edox (S5)	•	Depleted Dark Redox Depres Marl (F10) (LR	Surface sions (Fa RR K. L)	8)		Other (E	xplain in Remarks) ors of hvdrophytic vegetation and		
Stripped	Matrix (S6)	•	Red Parent Ma	aterial (F	21) (MLF	RA 145)	wetland hydrology must be present, unless disturbed or problematic.			
Restrictive I Type: Depth (ir	ayer (if observed):						Hydric Soil Prese	nt? Yes NoX		
Remarks:										

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Northcentral and See ERDC/EL TR-12-1; the proponent agency is CEC	OMB Control #: 0710-0024, Exp: 11/30/2024Northeast Region CW-CO-RCW-CO-R(Authority: AR 335-15, paragraph 5-2a)
Project/Site: Proposed River Oaks Subdivision Property	City/County: Hudson / Summit County Sampling Date: 5-18-23
Applicant/Owner: GVI, LLC	State: OH Sampling Point: DP15
Investigator(s): BDL / EW	Section, Township, Range:
Landform (hillside, terrace, etc.): Depression Local rel	lief (concave, convex, none): Concave Slope %: 0
Subregion (I RR or MI RA): I RR R Lat: 41 238428	Long: -81 473603 Datum: NAD83
Soil Map Unit Name:	NWI classification: PEM
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No significantly disturbe	ed? Are "Normal Circumstances" present? Yes X No
Are Vegetation No , Soil No , or Hydrology No naturally problemati	c? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing samp	oling 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: Wetland D
Remarks: (Explain alternative procedures here or in a separate report.)	
III DROLOGI	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (BS	<u>Secondary Indicators (minimum of two required)</u> Surface Soil Cracks (B6) Drainage Patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B8) High Water Table (A2) Aquatic Fauna (B13)	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B5) High Water Table (A2) Aquatic Fauna (B13) Saturation (A3) Marl Deposits (B15)	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B5) High Water Table (A2) Aquatic Fauna (B13) Saturation (A3) Marl Deposits (B15) Water Marks (B1) Hydrogen Sulfide Odor (C	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) (1)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) High Water Table (A2) Aquatic Fauna (B13) Saturation (A3) Marl Deposits (B15) Water Marks (B1) Hydrogen Sulfide Odor (C Sediment Deposits (B2) Oxidized Rhizospheres on	Bits Secondary Indicators (minimum of two required) Bits Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Drayfish Burrows (C8) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) High Water Table (A2) Aquatic Fauna (B13) Saturation (A3) Marl Deposits (B15) Water Marks (B1) Hydrogen Sulfide Odor (C Sediment Deposits (B2) Oxidized Rhizospheres on Drift Deposits (B3) Presence of Reduced Iron	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) C1) Crayfish Burrows (C8) a Living Roots (C3) Saturation Visible on Aerial Imagery (C9) a (C4) Stunted or Stressed Plants (D1)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (BS) High Water Table (A2) Aquatic Fauna (B13) Saturation (A3) Marl Deposits (B15) Water Marks (B1) Hydrogen Sulfide Odor (C Sediment Deposits (B2) Oxidized Rhizospheres on Drift Deposits (B3) Presence of Reduced Iron Algal Mat or Crust (B4) Recent Iron Reduction in	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) A Living Roots (C3) Saturation Visible on Aerial Imagery (C9) n (C4) Tilled Soils (C6) X Geomorphic Position (D2)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) High Water Table (A2) Aquatic Fauna (B13) Saturation (A3) Marl Deposits (B15) Water Marks (B1) Hydrogen Sulfide Odor (C Sediment Deposits (B2) Oxidized Rhizospheres on Drift Deposits (B3) Presence of Reduced Iron Algal Mat or Crust (B4) Recent Iron Reduction in Tin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Bits Secondary Indicators (minimum of two required) Bits Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Dry-Season Water Table (C2) Crayfish Burrows (C8) Crayfish Burrows (C8) a Living Roots (C3) Saturation Visible on Aerial Imagery (C9) a (C4) Stunted or Stressed Plants (D1) Tilled Soils (C6) X Geomorphic Position (D2) Shallow Aquitard (D3) X Microtopographic Relief (D4)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) High Water Table (A2) Aquatic Fauna (B13) Saturation (A3) Marl Deposits (B15) Water Marks (B1) Hydrogen Sulfide Odor (C Sediment Deposits (B2) Oxidized Rhizospheres on Drift Deposits (B3) Presence of Reduced Iron Algal Mat or Crust (B4) Recent Iron Reduction in Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) c1) Crayfish Burrows (C8) a Living Roots (C3) Saturation Visible on Aerial Imagery (C9) n (C4) Stunted or Stressed Plants (D1) Tilled Soils (C6) X Geomorphic Position (D2) Shallow Aquitard (D3) Sturetopographic Relief (D4) X FAC-Neutral Test (D5) X Sturetal Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) High Water Table (A2) Aquatic Fauna (B13) Saturation (A3) Marl Deposits (B15) Water Marks (B1) Hydrogen Sulfide Odor (C Sediment Deposits (B2) Oxidized Rhizospheres on Drift Deposits (B3) Presence of Reduced Iron Algal Mat or Crust (B4) Recent Iron Reduction in Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) c1) Crayfish Burrows (C8) n Living Roots (C3) Saturation Visible on Aerial Imagery (C9) n (C4) Stunted or Stressed Plants (D1) Tilled Soils (C6) X Geomorphic Position (D2) Shallow Aquitard (D3) Sturtoropographic Relief (D4) X FAC-Neutral Test (D5) X
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Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (BS) High Water Table (A2) Aquatic Fauna (B13) Saturation (A3) Marl Deposits (B15) Water Marks (B1) Hydrogen Sulfide Odor (C Sediment Deposits (B2) Oxidized Rhizospheres on Drift Deposits (B3) Presence of Reduced Iron 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 Remarks) Sparsely Vegetated Concave Surface (B8) Teipth (inches): Water Table Present? Yes No X Depth (inches):	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) c1) Crayfish Burrows (C8) a Living Roots (C3) Saturation Visible on Aerial Imagery (C9) n (C4) Stunted or Stressed Plants (D1) Tilled Soils (C6) X Geomorphic Position (D2) Shallow Aquitard (D3) s) X Microtopographic Relief (D4) X FAC-Neutral Test (D5)
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Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) High Water Table (A2) Aquatic Fauna (B13) Saturation (A3) Marl Deposits (B15) Water Marks (B1) Hydrogen Sulfide Odor (C Sediment Deposits (B2) Oxidized Rhizospheres on Drift Deposits (B3) Presence of Reduced Iron Algal Mat or Crust (B4) Recent Iron Reduction in Thin Muck Surface (C7) Iron Deposits (B5) Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) Staturation Present? Field Observations: No X Depth (inches): Saturation Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, prev Remarks: Remarks:	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) c1) Crayfish Burrows (C8) a Living Roots (C3) Saturation Visible on Aerial Imagery (C9) a (C4) Stunted or Stressed Plants (D1) Tilled Soils (C6) X Geomorphic Position (D2) Shallow Aquitard (D3) s) X Microtopographic Relief (D4) X FAC-Neutral Test (D5)
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Trace Other (Dist size: 20)	Absolute	Dominant	Indicator	Deminence Test werkeheet
<u>Tree Stratum</u> (Plot size: <u>30</u>)	% Cover	Species?		Dominance Test worksneet:
	F	Yee		Number of Dominant Species
2. Fraxinus pennsylvanica	5	Yes		That Are OBL, FACW, of FAC:(A)
 Ulmus americana 4. 	5	Yes	FACW	Total Number of Dominant Species Across All Strata: 7 (B)
5 6		·		Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
7				Prevalence Index worksheet:
	20	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 15)				OBL species x 1 =
1. Frangula alnus	5	Yes	FAC	FACW species x 2 =
2. Fraxinus pennsylvanica	5	Yes	FACW	FAC species x 3 =
3				FACU species x 4 =
4				UPL species x 5 =
5				Column Totals: (A) (B)
6				Prevalence Index = B/A =
7				Hydrophytic Vegetation Indicators:
	10	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 5)				X 2 - Dominance Test is >50%
1. Carex vulpinoidea	40	Yes	OBL	3 - Prevalence Index is ≤3.0 ¹
2. Glyceria striata	45	Yes	OBL	4 - Morphological Adaptations ¹ (Provide supporting
3. Onoclea sensibilis	15	No	FACW	data in Remarks or on a separate sheet)
4.				Problematic Hydrophytic Vegetation ¹ (Explain)
5.				¹ Indicators of hydric soil and wotland 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.				Sanling/shruh – 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: 30)				Woody vines – 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	ate sheet.)			
ENG FORM 6116-8, JUL 2018				Northcentral and Northeast – Version 2.0

Depth	 Matrix		Redo	x Featur	es			,
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-12	10YR 4/1	95	10YR 4/6	5	С	М	Loamy/Clayey	Prominent redox concentrations
12-20	10YR 6/1	70	10YR 5/8	30	С	М	Loamy/Clayey	Prominent redox concentrations
0-12 12-20 12-	10YR 4/1 10YR 6/1	95 70 	10YR 4/6 10YR 5/8	5 30 		 	Loamy/Clayey Loamy/Clayey	Prominent redox concentrations Prominent redox concentrations
Histosol	(A1)		Dark Surface ((S7)			2 cm Mu	uck (A10) (LRR K, L, MLRA 149B)
Histic Ep	pipedon (A2)		Polyvalue Belo	ow Surfa	ce (S8) (I	LRR R,	Coast P	rairie Redox (A16) (LRR K, L, R)
Black Hi	stic (A3)		MLRA 149E	3)	. , .		5 cm Mu	ucky Peat or Peat (S3) (LRR K, L, R)
Hydroge	n Sulfide (A4)		Thin Dark Sur	, face (S9)	(LRR R	MLRA 1	I49B) Polyvalu	ue Below Surface (S8) (LRR K, L)
Stratified	Lavers (A5)		High Chroma	Sands (S	(LRF	R K, L)	, Thin Da	rk Surface (S9) (LRR K, L)
Depleted	Below Dark Surface	e (A11)	Loamv Muckv	Mineral	(F1) (LRI	κ. L)	Iron-Ma	nganese Masses (F12) (LRR K. L. R)
' Thick Da	ark Surface (A12)	()	Loamv Gleved	Matrix (F2)	, ,	Piedmo	nt Floodplain Soils (F19) (MLRA 149B
Mesic St	(A17)		X Depleted Matr	ix (F3)	/		Red Par	rent Material (F21) (outside MLRA 14
(MLR	A 144A 145 149B)		Redox Dark S	urface (F	6)		Verv Sh	allow Dark Surface (F22)
Sandy M	lucky Mineral (S1)		Depleted Dark	Surface	(F7)		Other (F	Explain in Remarks)
Sandy G	ileyed Matrix (S4)		Redox Depres	sions (F	3)			
Sandy R	edox (S5)		 Marl (F10) (LF	RRK,L)			³ Indicate	ors of hydrophytic vegetation and
Stripped	Matrix (S6)		Red Parent Ma	aterial (F	21) (MLF	RA 145)	wetlar	nd hydrology must be present,
				·	, .		unles	s disturbed or problematic.
Restrictive I	_ayer (if observed):							
Type:								
Depth (ir	nches):						Hydric Soil Prese	nt? Yes <u>X</u> No
Remarks:								

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Northcentral and See ERDC/EL TR-12-1; the proponent agency is CE	d Northeast Region ECW-CO-R					
Project/Site: Proposed River Oaks Subdivision Property City/County: Hudson / Summit County Sampling Date: 5-18-23						
Applicant/Owner: GVI. LLC	State: OH Sampling Point: DP16					
Investigator(s): BDI / FW	Section Township Range:					
Landform (billside torrace etc.): Depression	collief (concover convex none): Concover Slone %: 0					
Subregion (LRR or MLRA): LRR R Lat: 41.238657	Long: -81.4/2806 Datum: NAD83					
Soil Map Unit Name:	NWI classification: PFO					
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)					
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> significantly disturb	bed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> naturally problema	tic? (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 Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland D					
HYDROLOGY						
	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	39) 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 Irc	on (C4) Stunted or Stressed Plants (D1)					
X Algal Mat or Crust (B4) Recent Iron Reduction in	n Tilled Soils (C6) X Geomorphic Position (D2)					
Iron Deposits (B5) Ihin Muck Surface (C7)	Shallow Aquitard (D3)					
Inundation Visible on Aerial Imagery (B7) Other (Explain in Reman	KS) X MICrotopographic Relief (D4)					
Field Observations:						
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:						

	Absolute	Dominant	Indicator	
<u>Tree Stratum</u> (Plot size: <u>30</u>)	% Cover	Species?	Status	Dominance Test worksheet:
1. Ulmus americana	45	Yes	FACW	Number of Dominant Species
2. Acer saccharinum	35	Yes	FACW	That Are OBL, FACW, or FAC:7 (A)
3. Quercus palustris	25	Yes	FACW	Total Number of Dominant
4. Pinus strobus	5	No	FACU	Species Across All Strata: 7 (B)
5				Percent of Dominant Species
6				That Are OBL, FACW, or FAC: 100.0% (A/B)
7				Prevalence Index worksheet:
	110	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 15)				OBL species x 1 =
1. Frangula alnus	10	Yes	FAC	FACW species x 2 =
2. Fraxinus pennsylvanica	15	Yes	FACW	FAC species x 3 =
3.				FACU species x 4 =
4.				UPL species x 5 =
5.				Column Totals: (A) (B)
6.				Prevalence Index = B/A =
7				Hydrophytic Vegetation Indicators:
	25	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 5)				X 2 - Dominance Test is >50%
	35	Voc	OBI	$\frac{1}{2} = \text{Dominance results} = 500\%$
	40	Vee		4 Morphological Adaptations ¹ (Provide supporting
2. Giycena striata	40	<u>res</u>		data in Remarks or on a separate sheet)
3. Fraxinus pennsylvanica	5			
4. Quercus palustris	5	No	FACW	Problematic Hydrophytic Vegetation (Explain)
5. Viburnum dentatum	5	No	FAC	¹ Indicators of hydric soil and wetland hydrology must
6. Ranunculus hispidus	5	No	FAC	be present, unless disturbed or problematic.
7. Toxicodendron radicans	5	No	FAC	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: 30)				Woody vines – 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	ate sheet.)			
				North control and North cost (14, 14, 20)

Depth	Matrix		Redo	x Featu	res				-	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	3
0-13	10YR 5/1	95	10YR 4/4	5	С	М	Loamy/Clayey	D	istinct redox cond	centrations
13-20	10YR 6/1	80	10YR 5/8	20	С	М	Loamy/Clayey	Pro	ominent redox cor	ncentrations
				·						
								·		
¹ Type: C=C	oncentration, D=Dep	letion, RM		MS=Mas	ked Sand	d Grains.	² Location:	PL=Pore	e Lining, M=Matri	х.
Hydric Soil	Indicators:	,	,			-	Indicators	s for Prol	blematic Hydric	Soils ³ :
Histosol	(A1)		Dark Surface	(S7)			2 cm	Muck (A1	0) (LRR K, L, MI	_RA 149B)
Histic Ep	bipedon (A2)		Polyvalue Belo	ow Surfa	ice (S8) (I	LRR R.	Coast	Prairie R	Redox (A16) (LRR	K, L, R)
Black Hi	stic (A3)		 MLRA 149E	3)	(-/(,	5 cm	Muckv Pe	eat or Peat (S3) (LRR K. L. R)
Hvdroge	n Sulfide (A4)		Thin Dark Sur	, face (S9) (LRR R	. MLRA	149B) Polvv	alue Belo	w Surface (S8) (I	-RR K. L)
Stratified	d Lavers (A5)		High Chroma	Sands (S	, , 511) (lr f	, R K. L)	Thin [Dark Surfa	ace (S9) (LRR K.	L)
 Depleter	d Below Dark Surface	e (A11)	Loamy Mucky	Mineral	(F1) (LR	R K. L)	Iron-N	langanes	e Masses (F12) ((LRR K. L. R)
Thick Da	ark Surface (A12)		Loamy Glever	Matrix ((F2)	, _,	Piedm	iont Floor	dolain Soils (F19)	(MI RA 1498)
Mesic S	nodic $(A17)$		X Depleted Matr	iv (E3)	(12)		Red F	Parent Ma	iterial (E21) (outs	
(MI P	A 144A 145 149B)		Beday Dark S	urface (F	-6)		Nerv 9	Shallow D	ark Surface (E22	
	A 144A, 143, 143D)		Redux Dark S		0) (E7)		Very .		in Pomarka)	-)
Sandy (Noved Metrix (S1)			Surface	;(<i>Г1)</i>			(Explain	III Remarks)	
Sandy B			Mart (E10) (LE		0)		³ India	otoro of h	vdrophytic vogot	ation and
Sanuy N	Motrix (S6)			atorial (E	24) /ML 6	DA 44E)	muic	lond hydr	vology must be pr	
Stripped				alenai (r	·2 !) (IVILI	(A 145)	unle	ess distur	bed or problemat	ic
Restrictive	Layer (if observed):									
Type:										
Depth (ii	nches):						Hydric Soil Pres	sent?	Yes X	No
Remarks:							-			

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Northcentral and See ERDC/EL TR-12-1; the proponent agency is CE	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)			
Project/Site: Proposed River Oaks Subdivision Property	City/County: Hudson / Su	ummit County Sampling Date: 5-18-23		
Applicant/Owner: GVI, LLC		State: OH Sampling Point: DP17		
Investigator(s): BDL / EW	Section, Townsh	nip, Range:		
Landform (hillside, terrace, etc.): Depression Local re	elief (concave, convex, no	one): Concave Slope %: 0		
Subregion (LRR or MLRA): LRR R Lat: 41.237093	Lona: -81	.473272 Datum: NAD83		
Soil Map Unit Name:		NWI classification: PSS		
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X	No (If no, explain in Remarks.)		
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> significantly disturb	ed? Are "Normal C	Circumstances" present? Yes X No		
Are Vegetation No , Soil No , or Hydrology No naturally problemat	tic? (If needed, exp	plain any answers in Remarks.)		
SUMMARY OF FINDINGS – Attach site map showing sample	pling point location	ns, transects, important features, etc.		
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No Remarks: (Explain alternative procedures here or in a separate report)	Is the Sampled Area within a Wetland? If yes, optional Wetland	Yes X No d Site ID: Wetland D		
HYDROLOGY				
Wetland Hydrology Indicators:	Sec	condary 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 (B	39) 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 (C	C1)	Crayfish Burrows (C8)		
Sediment Deposits (B2) Oxidized Rhizospheres o	n Living Roots (C3)	Saturation Visible on Aerial Imagery (C9)		
DINIT Deposits (B3)Presence of Reduced fro	Tilled Soils (C6) X	Geomorphic Position (D2)		
Iron Deposits (B5)		Shallow Aquitard (D3)		
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remark	(s) X	Microtopographic Relief (D4)		
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 No X Depth (inches):	Wetland Hy	/drology Present? Yes X No		
(includes capillary fringe)				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre-	vious inspections), if avai	lable:		
Remarks:				

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Quercus palustris	15	Yes	FACW	Number of Dominant Species
2. Ulmus americana	10	Yes	FACW	That Are OBL, FACW, or FAC:6 (A)
3 4				Total Number of Dominant Species Across All Strata: <u>6</u> (B)
5. 6.				Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
7				Prevalence Index worksheet:
	25	=Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 15)				OBL species x 1 =
1. Frangula alnus	60	Yes	FAC	FACW species x 2 =
2. Cornus racemosa	25	Yes	FAC	FAC species x 3 =
3.				FACU species x 4 =
4.				UPL species x 5 =
5.				Column Totals: (A) (B)
6.				Prevalence Index = B/A =
7.				Hydrophytic Vegetation Indicators:
	85	=Total Cover		1 - Rapid Test for Hydrophytic Vegetation
Herb Stratum (Plot size: 5)				X 2 - Dominance Test is >50%
1. Agrimonia parviflora	5	No	FAC	 3 - Prevalence Index is ≤3.0 ¹
2 Phalaris arundinacea	25	Yes	FACW	4 - Morphological Adaptations ¹ (Provide supporting
3 Carex vulninoidea	25	Yes	OBI	data in Remarks or on a separate sheet)
4 Francula alnus	5	<u></u> No	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
F. Trangula annus	10	No		
	10			¹ Indicators of hydric soil and wetland hydrology must
Giyceria striata				De present, unless disturbed of problematic.
	5			Definitions of vegetation Strata.
9	2		FACU	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
10.				Sanling/abruh Waady plants loss than 2 in DPH
11.				and greater than or equal to 3.28 ft (1 m) tall.
12.				
	90	=Total Cover		of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size: 30)				Woody vines – All woody vines greater than 3.28 ft in
1				height.
2				I hadron ha dia
3				Vegetation
4				Present? Yes X No
		=Total Cover		
Remarks: (Include photo numbers here or on a separ	ate sheet.)			
				North control on d North cost () (cosion 0.0

Profile Des	cription: (Describe	to the de	pth needed to doc	ument th	ne indica	ator or c	onfirm the absence o	f indicators.)		
Depth	Matrix		Redo	x Feature	es					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-12	10YR 3/2	90	5R 5/8	10	С	М	Loamy/Clayey	Prominent redox concentrations		
12-20	10YR 6/1	80	10YR 6/8	20	С	М	Loamy/Clayey	Prominent redox concentrations		
	·									
	·									
	<u> </u>				·					
	<u> </u>									
¹ Type: C=C	oncentration D=Dep	letion RM		MS=Masl	ked Sand	Grains	² Location [.] P	PI=Pore Lining M=Matrix		
Hydric Soil	Indicators:						Indicators for	or Problematic Hydric Soils ³ :		
Histoso	l (A1)		Dark Surface ((S7)			2 cm Mu	uck (A10) (LRR K, L, MLRA 149B)		
Histic E	pipedon (A2)		Polyvalue Belo	ow Surfac	ce (S8) (I	LRR R,	Coast P	rairie Redox (A16) (LRR K, L, R)		
Black H	istic (A3)		MLRA 149B	B)			5 cm Mu	ucky Peat or Peat (S3) (LRR K, L, R)		
Hydroge	en Sulfide (A4)		Thin Dark Sur	face (S9)	(LRR R	, MLRA ′	149B) Polyvalu	le Below Surface (S8) (LRR K, L)		
Stratifie	d Layers (A5) d Bolow Dork Surfoor	~ (11)	High Chroma	Sands (S Minorol (511) (LRF (E1) (LRF	R K, L)	I hin Dai	rk Surface (S9) (LRR K, L)		
Thick D	ark Surface (A12)	e (ATT)	Loamy Gleved	Matrix (I	(F1) (LRI F2)	κ κ, μ)	lion-war Piedmor	t Eloodolain Soils (F12) (LKK K, L, K)		
Mesic S	podic (A17)		Depleted Matri	ix (F3)			Red Par	ent Material (F21) (outside MLRA 145)		
(MLF	, RA 144A, 145, 149B)		X Redox Dark S	urface (F	6)		Very Shallow Dark Surface (F22)			
Sandy M	Aucky Mineral (S1)		Depleted Dark	Surface	(F7)		Other (Explain in Remarks)			
Sandy (Gleyed Matrix (S4)		Redox Depres	sions (F8	3)					
Sandy F	Redox (S5)		Marl (F10) (LR	RR K, L)			³ Indicato	ors of hydrophytic vegetation and		
Stripped	d Matrix (S6)		Red Parent Ma	aterial (F	21) (MLF	RA 145)	wetlar	nd hydrology must be present,		
Destrictive							unless	s disturbed or problematic.		
Type:	Layer (II observed):									
Depth (i	nches):						Hydric Soil Prese	nt? Yes X No		
Remarks:										

APPENDIX D

ORAM DATA FORMS



Background Information

Name:	Benjamin Latoche
Date:	5-15-2023
Affiliation:	HZW Environmental Consultants, LLC
Address:	6105 Heisley Road
Phone Number:	440-357-1260
e-mail address:	blatoche@hzwenv.com
Name of Wetland:	Wetland A
Vegetation Communit(ies):	Emergent
HGM Class(es):	Depression (I) Surface Water (A)
Location of Wetland include ma	ap, address, north arrow, landmarks, distances, roads, etc.
Lat/Lon or UTM Coordinate	41 236271°-81 467520°
USGS Quad Name	Hudson
County	Summit
City	Hudson
Section and Subsection	
Hydrologic Unit Code	Cuyahoga River watershed (HUC 8: 04110002)
Site Visit	Yes
National Wetland Inventory Ma	ip Yes
Ohio Wetland Inventory Map	No
Soil Survey	Yes
Delineation Report/Map	Yes

Name: Wetland A		
Wetland Size (acres, hectares)		~0.2 AC
Sketch (include north arrow, relationship with oth	ner surface waters, vegetation	zones, etc.
Sketch (include north arrow, relationship with oth See Report.	her surface waters, vegetation	zones, etc.
Comments, Narrative Discussion, Justification o	f Category Changes	
Final Score: 26	Category	1

Scoring Boundaries 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 and isolated from 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 Unit 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 mitigation site, conservation site, etc.	Yes	
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 other parts of a single wetland.	Yes	
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.	Yes	
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.	Yes	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	N/A	
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.	Yes	

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), <u>http://www.dnr.state.oh.us/odnr/dnap/</u>. The remaining questions are designed to be answered primarily from the results of the field 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 and 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 Reynoldsburg 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	Circle One
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).	YES NO Wetland should be evaluated for possible Category 3 status Go to Question 2
2	Threatened or Endangered Species . Is the wetland known to contain an individual of, or documented occurrences of federally or state-listed threatened or endangered plant or animal species?	YES NO Wetland is a Category 3 Go to Question 3 wetland. Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES NO Wetland is a Category 3 Go to Question 4 Go to Question 4
4	Significant Breeding or Concentration Area . Does the wetland contain documented regionally significant breeding or non breeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES NO Wetland is a Category 3 Go to Question 5 wetland.
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 <i>Phalaris arundunacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 Go to Question 6 Go to Question 6
6	Bogs. 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) <25%?	YES Wetland is a Category 3 Wetland. Go to Question 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 more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES NO Wetland is a Category 3 Go to Question 8a Go to Question 8a

#	Question	Circle One	
8a 8b	 "Old Growth Forest." Is the wetland a forested wetland and the forest is 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 no 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? 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? 	YES Wetland is a Category 3 wetland. Go to Question 8b YES Wetland should be evaluated for possible Category 3 status.	NO Go to Question 8b NO Go to Question 9a
9a	Lake Erie coastal and tributary wetlands . Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9a YES Go to Question 9b	NO 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?	YES (Wetland should be evaluated for possible Category 3 status.	NO 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.	YES (NO 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 plant species can also be present?	YES (Wetland is a Category 3 wetland.	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 10	NO 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.	YES Wetland is a Category 3 wetland. Go to Question 11	NO 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, Erie County, and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, etc.).	YES (Wetland should be evaluated for possible Category 3 status. Go to Question 6	NO Complete Quantitative Rating

Table 1. Characteristic plant species.

invasive/exotic spp.	fen species	bog species	Oak Opening species	wet prairie species
invasive/exotic spp. Lythrum salicaria Myriophyllum spicatum Najas minor Phalaris grundinacea	fen species Zygadenus elegans var. glaucus Cacalia plantaginea Carex flava Carex sterilis	bog species Calla palustris Carex atlantica var. capillacea Carex echinata Carex oligosperma	Oak Opening species Carex cryptolepis Carex lasiocarpa Carex stricta Cladium mariscoides	wet prairie species Calamagrostis canadensis Calamogrostis stricta Carex atherodes Carex buxhaumii
Phragmites australis Potamogeton crispus Ranunculus ficaria Rhamnum frangula Typha angustifolia Typha xglauca	Carex stricta 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 glutinos Triglochin maritimum	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	Calamagrotis stricta Calamagrotis canadensis Quercus palustris	Carex pellita Carex sartwellii Gentiana andrewsii Helianthun grosseserratus Liatris spicata Lysimachia quadriflora Lythrum alatum Pycnanthemum virginanum Silphium terebinthinaceum Sorghastrum nutans Spartina pectinata Solidago riddellii

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: Wetland A



Site: We	tland A		Rate	r(s): BDL	Date: 5-15-2023
24.0					
Subtotal first	page				
0	24.0	Matric 5 Special Watlands			
max 10 pts.	Subtotal	Metric 5. Special Wetlands. Check all that apply and score as indicate Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetland Lake Erie coastal/tributary wetland Lake Plain Sand Prairies (Oak Ope	d. -unrestrict -restricted enings) (10	ed hydrology (10) hydrology (5)))	
		Relict Wet Prairies (10) Known occurrence state/federal thu Significant migratory songbird/wate Category 1 Wetland. See Question	reatened e er fowl hat n 1 Qualita	ndangered species (10) itat or usage (10) itive Rating (-10))
2.0	26.0	Metric 6. Plant communities,	intersp	ersion, microtop	ography.
max 20 pts.	Subtotal	6a. Wetland Vegetation Communities	Venetat	ion Community Cover	Scale
		Aquatic Bed		Absent or comprises	<0.1ha (0.2471 acres) contiguous area
		2 Emergent 0 Shrub 0 Forest	1	Present and either co and is of moderate qu of low quality	mprises small part of wetland's vegetation ality, or comprises a significant part but is
		Mudflats Open water Other:	2	Present and either co vegetation and is of m and is of high quality	mprises significant part of wetland's noderate quality or comprises a small part
			3	Present and comprise vegetation and is of h	es significant part, or more, of wetland's igh quality
		6b. horizontal (plan view) interspersion			
		Select only one. High (5) Moderately high (4)	low	Low spp diversity and disturbance tolerant n	tation Community I/or predominance of nonnative or native species
		Moderate (3) 2 Moderately low (2) Low (1) None (0)	mod	Native spp are domina nonnative and/or distu present, and species generally w/o presence	ant component of the vegetation, althoug urbance tolerant native spp can be diversity moderate to moderately high, bu ce of rare threatened or endangered spp
		6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for	high	A predominance of na disturbance tolerant n high spp diversity, and rare, threatened, or en	ative species, with nonnative spp and/or ative spp absent or virtually absent, and d often, but not always, the presence of ndangered spp
		List. Add or deduct points for coverage	Mudflat	and Onen Water Class	o Quality
		-3 Moderate 25-75% cover (-3)		Absent <0 1ha (0 247	acres)
		Sparse 5-25% cover (-1)	1	Low 0.1 to <1ha (0.24	47 to 2.47 acres)
		Nearly absent <5% cover (0) Absent (1)	23	Moderate 1 to <4ha (2 High 4ha (9.88 acres)	2.47 to 9.88 acres)) or more
		6d. Microtopography.		,	
		Score all present using 0 to 3 scale.	Microto	pography Cover Scale	
		1 Vegetated hummucks/tussucks 0 Coarse woody debris >15cm (6in) 0 Standing dead >25cm (10in) dbh	<u> 0</u> 1	Absent Present very small an quality	nounts or if more common of marginal
		0 Amphibian breeding pools	2	Present in moderate a	amounts, but not of highest quality or in

		,
bh		quality
	2	Present in moderate amounts, but not of highest quality or in
		small amounts of highest qualities
	3	Present in moderate or greater amounts and of highest qualities

26.0 **GRAND TOTAL (max 100 pts)**

CATEGORY: 1

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

ORAM Summary Worksheet

		Circle or s	e answer insert core	
Narrative Rating	Question 1. Critical Habitat	YES	(NO)	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES	(NO)	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES	NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES	NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES	NO	If yes, Category 1.
	Question 6. Bogs	YES	NO	If yes, Category 3.
	Question 7. Fens	YES	NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES	NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES	(NO)	If yes, evaluate for Category 3: may be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES	NO	If yes, evaluate for Category 3: may be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted	YES	NO	If yes, Category 3.
	Question 9e. Lake Erie Wetlands – Unrestricted with invasive plants	YES	NO	If yes, evaluate for Category 3: may be 1 or 2.
	Question 10. Oak Openings	YES	NO	If yes, Category 3.
	Question 11. Relict Wet Prairies	YES	NO	If yes, evaluate for Category 3: may be 1 or 2
Quantitative Rating	Metric 1. Size		1	
	Metric 2. Buffers and surrounding land use		4	
	Metric 3. Hydrology		11	
	Metric 4. Habitat		8	
	Metric 5. Special Wetland Communities		0	
	Metric 6. Plant communities, interspersion,		2	
			26	Catagony based on asore
	Consult most recent score calibration report at		20	breakpoints
	http://www.epa.state.oh.us/dsw/401/401.html to			
	determine the wetland's category based on its quantitative score			Category 1

Complete Wetland Categorization Worksheet

Wetland A

Wetland Categorization Worksheet

Choices	Circle one		
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	Yes (Wetland is categorized as a Category 3 wetland	No	Is quantitative rating score <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	Yes (Wetland should be evaluated for possible Category 3 status	No	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If 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 Nos. 5	Yes (Wetland is categorized as a Category 1 wetland	No	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 ha been under-categorized by the ORAM.
Does the quantitative score fall within (the scoring range of a Category 1, 2, or 3 wetland?	Yes Wetland is assigned to the appropriate category based on the scoring range.	No	If the score of the wetland is located within the scoring range of 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 within the " <i>gray zone</i> " for Category 1 or 2 or Category 2 or 3 wetlands?	Yes (Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria.	No	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of the non-rapid 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 <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method ?	Yes (Wetland was under- categorized by this method. A written justification for recategorization should be provided on Background Information Form	No Wetland is assigned to category as determined by the ORAM.	A wetland may be under-categorized 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 regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category						
Choose one	Choose one Category 1 Category 2 Category 3					

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name:	Benjamin Latoche
Date:	5-15-2023
Affiliation:	HZW Environmental Consultants, LLC
Address:	6105 Heisley Road
Phone Number:	440-357-1260
e-mail address:	blatoche@hzwenv.com
Name of Wetland:	Wetland B
Vegetation Communit(ies):	Emergent
HGM Class(es):	Depression (I) Surface Water (A)
Location of Wetland include m	ap, address, north arrow, landmarks, distances, roads, etc.
See Report.	
Lat/Lop or LITM Coordinate	41.0070000 81.4671800
	41.237090, -01.407102 Hudson
County	Summit
City	Hudson
Section and Subsection	
Hydrologic Unit Code	Cuyahoga River watershed (HUC 8: 04110002)
Site Visit	Yes
National Wetland Inventory Ma	ap Yes
Ohio Wetland Inventory Map	No
Soil Survey	Yes
Delineation Report/Map	Yes

Name: Wetland B			
Wetland Size (acres, hec	tares)		0.05
Sketch (include nort	h arrow, relationship with other su	face waters, vegetation	zones, etc.
Sketch (include hort See Report.	n arrow, relationship with other su	Tace waters, vegetation	zones, etc.
Comments. Narrativ	e Discussion. Justification of Cate	gory Changes	
	,		
Final Score:	25.0	Category	1
Scoring Boundaries 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 and isolated from 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 Unit 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 mitigation site, conservation site, etc.	Yes	
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 other parts of a single wetland.	Yes	
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.	Yes	
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.	Yes	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	N/A	
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.	Yes	

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), <u>http://www.dnr.state.oh.us/odnr/dnap/</u>. The remaining questions are designed to be answered primarily from the results of the field 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 and 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 Reynoldsburg 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	Circle One
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).	YES NO Wetland should be evaluated for possible Category 3 status Go to Question 2
2	Threatened or Endangered Species . Is the wetland known to contain an individual of, or documented occurrences of federally or state-listed threatened or endangered plant or animal species?	YES NO Wetland is a Category 3 Go to Question 3 wetland. Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES NO Wetland is a Category 3 Go to Question 4 Go to Question 4
4	Significant Breeding or Concentration Area . Does the wetland contain documented regionally significant breeding or non breeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES NO Wetland is a Category 3 Go to Question 5 wetland.
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 <i>Phalaris arundunacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 Go to Question 6 Go to Question 6
6	Bogs. 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) <25%?	YES NO Wetland is a Category 3 Go to Question 7 wetland. Go to Question 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 more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES NO Wetland is a Category 3 Go to Question 8a Go to Question 8a

#	Question	Circle One	
8a 8b	 "Old Growth Forest." Is the wetland a forested wetland and the forest is 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 no 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? 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? 	YES Wetland is a Category 3 wetland. Go to Question 8b YES Wetland should be evaluated for possible Category 3 status.	NO Go to Question 8b NO Go to Question 9a
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands . Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	NO 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?	YES (Wetland should be evaluated for possible Category 3 status.	NO 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.	YES (NO 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 plant species can also be present?	YES (Wetland is a Category 3 wetland.	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status. Go to Ouestion 10	NO 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.	YES Wetland is a Category 3 wetland. Go to Question 11	NO 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, Erie County, and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, etc.).	YES (Wetland should be evaluated for possible Category 3 status. Go to Question 6	NO Complete Quantitative Rating

Table 1. Characteristic plant species.

invasive/exotic spp.	fen species	bog species	Oak Opening species	wet prairie species
invasive/exotic spp. Lythrum salicaria Myriophyllum spicatum Najas minor Phalaris grundinacea	fen species Zygadenus elegans var. glaucus Cacalia plantaginea Carex flava Carex sterilis	bog species Calla palustris Carex atlantica var. capillacea Carex echinata Carex oligosperma	Oak Opening species Carex cryptolepis Carex lasiocarpa Carex stricta Cladium mariscoides	wet prairie species Calamagrostis canadensis Calamogrostis stricta Carex atherodes Carex buxbaumii
Phragmites australis Potamogeton crispus Ranunculus ficaria Rhamnum frangula Typha angustifolia Typha xglauca	Carex stricta 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 glutinos Triglochin maritimum	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	Calamagrotis stricta Calamagrotis canadensis Quercus palustris	Carex pellita Carex sartwellii Gentiana andrewsii Helianthun grosseserratus Liatris spicata Lysimachia quadriflora Lythrum alatum Pycnanthemum virginanum Silphium terebinthinaceum Sorghastrum nutans Spartina pectinata Solidago riddellii

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: Wetland B



Site: Wetland B		Rate	r(s): CJB / BDL	Date: 5-15-2023
22.0				
23.0				
Subtotal first page				
0 23.0	1			
0 23.0	Metric 5. Special Wetlands.			
nax 10 pts. Subtotal	Check all that apply and score as indicated	d.		
	Bog (10)			
	Fen (10)			
	Old growth forest (10) Mature forested wetland (5)			
	Lake Erie coastal/tributary wetland	-unrestrict	ed hydrology (10)	
	Lake Erie coastal/tributary wetland	-restricted	hydrology (5)	
	Lake Plain Sand Prairies (Oak Ope	enings) (10))	
	Known occurrence state/federal thr	eatened e	ndangered species (10)	
	Significant migratory songbird/wate	er fowl hab	itat or usage (10)	
	Category 1 Wetland. See Question	n 1 Qualita	tive Rating (-10)	
2.0 25.0				
may 20 nta Subtatal	Metric 6. Plant communities, i	ntersp	ersion, microtopog	raphy.
nax 20 pis. Subiolai	Score all present using 0 to 3 scale	Vegetat	ion Community Cover Sc	ale
	Aquatic Bed	0	Absent or comprises <0.2	1ha (0.2471 acres) contiguous area
	2 Emergent	1	Present and either compr	rises small part of wetland's vegetation
	0 Shrub		of low quality	y, or comprises a significant part but is
	Mudflats	2	Present and either comp	rises significant part of wetland's
	Open water		vegetation and is of mode	erate quality or comprises a small part
	Other:		and is of high quality	·
		3	vegetation and is of high	ignificant part, or more, of wetland s
	6b. horizontal (plan view) interspersion			4
	Select only one.	Narrativ	e Description of Vegetati	on Community
	Hign (5) Moderately high (4)	IOW	disturbance tolerant nativ	predominance of nonnative or
	Moderate (3)	mod	Native spp are dominant	component of the vegetation, althoug
	2 Moderately low (2)		nonnative and/or disturba	ance tolerant native spp can be
	Low (1)		present, and species dive	ersity moderate to moderately high, bu if rare threatened or endangered spp
		hiah	A predominance of native	e species, with nonnative spp and/or
			disturbance tolerant nativ	e spp absent or virtually absent, and
	6c. Coverage of invasive plants.		high spp diversity, and of	ten, but not always, the presence of
	List Add or deduct points for coverage		rare, threatened, or enda	ngered spp
	Extensive >75% cover (-5)	Mudflat	and Open Water Class Q	uality
	-3 Moderate 25-75% cover (-3)	0	Absent <0.1ha (0.247 ac	res)
	Sparse 5-25% cover (-1)	1	Low 0.1 to <1ha (0.247 to	2.47 acres)
	Absent (1)	3	High 4ha (9.88 acres) or	more
	· ···· · · · · · · · · · · · · ·	•		
	6d. Microtopography.	Mignet		
	Score all present using 0 to 3 scale.		pograpny Cover Scale	
	0 Coarse woody debris >15cm (6in)	1	Present very small amou	nts or if more common of marginal
	0 Standing dead >25cm (10in) dbh		quality	č

2

3

0 Amphibian breeding pools

GRAND TOTAL (max 100 pts)

25.0

CATEGORY: 1

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

Present in moderate or greater amounts and of highest qualities

small amounts of highest qualities

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

ORAM Summary Worksheet

		Circle or	e answer insert core	
Narrative Rating	Question 1. Critical Habitat	YES	(NO)	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES	(NO)	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES	NO) If yes, Category 3.
	Question 4. Significant bird habitat	YES	NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES	NO	If yes, Category 1.
	Question 6. Bogs	YES	NO	If yes, Category 3.
	Question 7. Fens	YES	NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES	NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES	(NO)	If yes, evaluate for Category 3: may be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES	NO	If yes, evaluate for Category 3: may be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted	YES	NO	If yes, Category 3.
	Question 9e. Lake Erie Wetlands – Unrestricted with invasive plants	YES	NO	If yes, evaluate for Category 3: may be 1 or 2.
	Question 10. Oak Openings	YES	NO	If yes, Category 3.
	Question 11. Relict Wet Prairies	YES	NO	If yes, evaluate for Category 3: may be 1 or 2
Quantitative Rating	Metric 1. Size		0	
	Metric 2. Buffers and surrounding land use		5	
	Metric 3. Hydrology		10	
	Metric 4. Habitat		8	
	Metric 5. Special Wetland Communities		0	
	Metric 6. Plant communities, interspersion,		2	
	TOTAL SCORE		25	Category based on score
	Consult most recent score calibration report at			breakpoints
	http://www.epa.state.oh.us/dsw/401/401.html to			
	determine the wetland's category based on its quantitative score			Category 1

Complete Wetland Categorization Worksheet

Wetland B

Wetland Categorization Worksheet

	a		
Choices	Circle one	r	
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	Yes (Wetland is categorized as a Category 3 wetland	No	Is quantitative rating score <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	Yes (Wetland should be evaluated for possible Category 3 status	No	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If 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 Nos. 5	Yes (Wetland is categorized as a Category 1 wetland	No	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 ha been under-categorized by the ORAM.
Does the quantitative score fall within (the scoring range of a Category 1, 2, or 3 wetland?	Yes Wetland is assigned to the appropriate category based on the scoring range.	No	If the score of the wetland is located within the scoring range of 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 within the " <i>gray zone</i> " for Category 1 or 2 or Category 2 or 3 wetlands?	Yes (Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria.	No	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of the non-rapid 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 <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method ?	Yes Wetland was under- categorized by this method. A written justification for recategorization should be provided on Background Information Form	No Wetland is assigned to category as determined by the ORAM.	A wetland may be under-categorized 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 regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category				
Choose one	Category 1	Category 2	Category 3	

End of Ohio Rapid Assessment Method for Wetlands.

Wetland B

Background Information

Name:	Benjamin Latoche
Date:	5-15-2023
Affiliation:	HZW Environmental Consultants, LLC
Address:	6105 Heisley Road
Phone Number:	440-357-1260
e-mail address:	blatoche@hzwenv.com
Name of Wetland:	Wetland C
Vegetation Communit(ies):	Emergent
HGM Class(es):	Depression (I) Surface Water (A)
Location of Wetland include ma	ap, address, north arrow, landmarks, distances, roads, etc.
Lat/Lon or UTM Coordinate	41,237538°81,467808°
USGS Quad Name	Hudson
County	Summit
City	Hudson
Section and Subsection	
Hydrologic Unit Code	Cuyahoga River watershed (HUC 8: 04110002)
Site Visit	Yes
National Wetland Inventory Ma	ap Yes
Ohio Wetland Inventory Map	No
Soil Survey	Yes
Delineation Report/Map	Yes

Name: Wetland C			
Wetland Size (acres, hectares)			0.22 ac
Sketch (include north arro	w, relationship with other surface	ce waters, vegetation	zones, etc.
Sketch (include north arro See Report.	w, relationship with other surface	ce waters, vegetation	zones, etc.
Commonte Narrativo Disc	nussion Justification of Catagor	ny Changes	
Comments, Narrative Disc	cussion, justification of Catego	y Unanges	
Final Score:	24.0	Category	1

Scoring Boundaries 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 and isolated from 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 Unit 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 mitigation site, conservation site, etc.	Yes	
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 other parts of a single wetland.	Yes	
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.	Yes	
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.	Yes	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	N/A	
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.	Yes	

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), <u>http://www.dnr.state.oh.us/odnr/dnap/</u>. The remaining questions are designed to be answered primarily from the results of the field 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 and 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 Reynoldsburg 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	Circle One
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).	YES NO Wetland should be evaluated for possible Category 3 status Go to Question 2
2	Threatened or Endangered Species . Is the wetland known to contain an individual of, or documented occurrences of federally or state-listed threatened or endangered plant or animal species?	YES NO Wetland is a Category 3 Go to Question 3 wetland. Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES NO Wetland is a Category 3 Go to Question 4 Go to Question 4
4	Significant Breeding or Concentration Area . Does the wetland contain documented regionally significant breeding or non breeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES NO Wetland is a Category 3 Go to Question 5 wetland.
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 <i>Phalaris arundunacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 Go to Question 6 Go to Question 6
6	Bogs. 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) <25%?	YES NO Wetland is a Category 3 Go to Question 7 wetland. Go to Question 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 more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES NO Wetland is a Category 3 Go to Question 8a Go to Question 8a

#	Question	Circle One	
8a 8b	 "Old Growth Forest." Is the wetland a forested wetland and the forest is 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 no 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? 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? 	YES Wetland is a Category 3 wetland. Go to Question 8b YES Wetland should be evaluated for possible Category 3 status.	NO Go to Question 8b NO Go to Question 9a
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands . Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	NO 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?	YES (Wetland should be evaluated for possible Category 3 status.	NO 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.	YES (NO 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 plant species can also be present?	YES (Wetland is a Category 3 wetland.	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 10	NO 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.	YES Wetland is a Category 3 wetland. Go to Question 11	NO 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, Erie County, and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, etc.).	YES (Wetland should be evaluated for possible Category 3 status. Go to Question 6	NO Complete Quantitative Rating

Table 1. Characteristic plant species.

invasive/exotic spp.	fen species	bog species	Oak Opening species	wet prairie species
invasive/exotic spp. Lythrum salicaria Myriophyllum spicatum Najas minor Phalaris grundinacea	fen species Zygadenus elegans var. glaucus Cacalia plantaginea Carex flava Carex sterilis	bog species Calla palustris Carex atlantica var. capillacea Carex echinata Carex oligosperma	Oak Opening species Carex cryptolepis Carex lasiocarpa Carex stricta Cladium mariscoides	wet prairie species Calamagrostis canadensis Calamogrostis stricta Carex atherodes Carex buxbaumii
Phragmites australis Potamogeton crispus Ranunculus ficaria Rhamnum frangula Typha angustifolia Typha xglauca	Carex stricta 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 glutinos Triglochin maritimum	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	Calamagrotis stricta Calamagrotis canadensis Quercus palustris	Carex pellita Carex sartwellii Gentiana andrewsii Helianthun grosseserratus Liatris spicata Lysimachia quadriflora Lythrum alatum Pycnanthemum virginanum Silphium terebinthinaceum Sorghastrum nutans Spartina pectinata Solidago riddellii

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: Wetland C



Site: Wetland C		Rate	er(s): BDL Date: 5-15-2023
		•	
22.0			
Subtotal first page			
1.0			
0 22.0			
-	Metric 5. Special Wetlands.		
nax 10 pts. Subtotal	Check all that apply and score as indicate	d.	
	Bog (10)		
	Fen (10)		
	Mature forested wetland (5)		
	Lake Erie coastal/tributary wetland	-unrestrict	ted hydrology (10)
	Lake Erie coastal/tributary wetland	-restricted	hydrology (5)
	Lake Plain Sand Prairies (Oak Ope	enings) (10	0)
	Relict Wet Prairies (10)	enterned a	and an architec (10)
	Significant migratory songbird/wate	eatened e	bitat or usage (10)
	Category 1 Wetland. See Question	n 1 Qualita	ative Rating (-10)
20 240			
2.0 21.0	Metric 6. Plant communities.	intersp	ersion, microtopography,
nax 20 pts. Subtotal	6a. Wetland Vegetation Communities	•	
	Score all present using 0 to 3 scale.	Vegetat	tion Community Cover Scale
	Aquatic Bed	1	Absent or comprises <0.1ha (0.2471 acres) contiguous area
	2 Emergent 0 Shrub	I	and is of moderate quality or comprises a significant part b
	0 Forest		of low quality
	Mudflats	2	Present and either comprises significant part of wetland's
	Open water		vegetation and is of moderate quality or comprises a small
	Other:	2	and is of high quality
		3	vegetation and is of high quality
	6b. horizontal (plan view) interspersion		
	<u>Selec</u> t only one.	Narrativ	ve Description of Vegetation Community
	High (5)	low	Low spp diversity and/or predominance of nonnative or
	Moderately high (4)	mad	disturbance tolerant native species
	2 Moderately low (2)	mou	nonnative and/or disturbance tolerant native spn can be
	Low (1)		present, and species diversity moderate to moderately high
	None (0)		generally w/o presence of rare threatened or endangered s
		high	A predominance of native species, with nonnative spp and/
	Co. Coverna of investive plants		disturbance tolerant native spp absent or virtually absent, a
	Refer to Table 1 ORAM long form for		rare threatened or endangered spp
	List. Add or deduct points for coverage		
	Extensive >75% cover (-5)	Mudflat	t and Open Water Class Quality
	-3 Moderate 25-75% cover (-3)	0	Absent <0.1ha (0.247 acres)
	Sparse 5-25% cover (-1)	1	Low 0.1 to <1ha (0.247 to 2.47 acres)
	Nearly absent <5% cover (0)	2	High 4ha (9.88 acres) or more
		5	1 11gh Tha (3.00 acres) of more
	6d. Microtopography.		
	Score all present using 0 to 3 scale.	Microto	ppography Cover Scale
	1 Vegetated hummucks/tussucks	0	Absent
	U I Coarse woodv debris >15cm (6in)	1	Present very small amounts or it more common of marginal

vogotatod nanimaoko/taboaoko	0	186611
Coarse woody debris >15cm (6in)	1	Present very small amounts or if more common of marginal
Standing dead >25cm (10in) dbh	_	quality
Amphibian breeding pools	2	Present in moderate amounts, but not of highest quality or in
	_	small amounts of highest qualities
	3	Present in moderate or greater amounts and of highest qualities

24.0 **GRAND TOTAL (max 100 pts)**

0 0

CATEGORY: 1

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

ORAM Summary Worksheet

		Circle or i so	answer insert core	
Narrative Rating	Question 1. Critical Habitat	YES	(NO)	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES	(NO)	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES	NO) If yes, Category 3.
	Question 4. Significant bird habitat	YES	NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES	NO	If yes, Category 1.
	Question 6. Bogs	YES	NO	If yes, Category 3.
	Question 7. Fens	YES	NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES	NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES	NO	If yes, evaluate for Category 3: may be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES	NO	If yes, evaluate for Category 3: may be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted	YES	NO	If yes, Category 3.
	Question 9e. Lake Erie Wetlands – Unrestricted with invasive plants	YES	NO	If yes, evaluate for Category 3: may be 1 or 2.
	Question 10. Oak Openings	YES	NO	If yes, Category 3.
	Question 11. Relict Wet Prairies	YES	NO	If yes, evaluate for Category 3: may be 1 or 2
Quantitative Rating	Metric 1. Size		1	
	Metric 2. Buffers and surrounding land use		3	
	Metric 3. Hydrology		10	
	Metric 4. Habitat		8	
	Metric 5. Special Wetland Communities		0	
	Metric 6. Plant communities, interspersion,		2	
			24	Category based on score
	Consult most recent score calibration report at		27	breakpoints
	http://www.epa.state.oh.us/dsw/401/401.html to			
	determine the wetland's category based on its quantitative score			Category 1

Complete Wetland Categorization Worksheet

Wetland C

Wetland Categorization Worksheet

Choices	Circle one		
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	Yes (Wetland is categorized as a Category 3 wetland	No	Is quantitative rating score <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	Yes (Wetland should be evaluated for possible Category 3 status	No	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If 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 Nos. 5	Yes (Wetland is categorized as a Category 1 wetland	No	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 ha been under-categorized by the ORAM.
Does the quantitative score fall within (the scoring range of a Category 1, 2, or 3 wetland?	Yes Wetland is assigned to the appropriate category based on the scoring range.	No	If the score of the wetland is located within the scoring range of 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 within the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	Yes (Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria.	No	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of the non-rapid 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 <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method ?	Yes (Wetland was under- categorized by this method. A written justification for recategorization should be provided on Background Information Form	No Wetland is assigned to category as determined by the ORAM.	A wetland may be under-categorized 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 regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category				
Choose one	Category 1	Category 2	Category 3	

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name:	Benjamin Latoche
Date:	5-18-2023
Affiliation:	HZW Environmental Consultants, LLC
Address:	6105 Heisley Road
Phone Number:	440-357-1260
e-mail address:	cbiro@hzwenv.com
Name of Wetland:	Wetland D
Vegetation Communit(ies):	Forested, Emergent, Scrub-Shrub
HGM Class(es):	Depression (I) Surface Water (A), Riverine (III)
Location of Wetland include m	ap, address, north arrow, landmarks, distances, roads, etc.
	41.230812 , -81.470795
County	Summit
City	Hudson
Section and Subsection	
Hydrologic Unit Code	Cuyahoga River watershed (HUC 8: 04110002)
Site Visit	Yes
National Wetland Inventory Ma	ap Yes
Ohio Wetland Inventory Map	No
Soil Survey	Yes
Delineation Report/Map	Yes

Name: Wetland D		
Wetland Size (acres, hectares)		~40 ac
Sketch (include north arrow, relationship	with other surface waters, vegetation	n zones, etc.
See Report.		
Commonto Norrotivo Disquesion Justifi	action of Catagony Changes	
Comments, Narrative Discussion, Justin	callon of Calegory Changes	
Final Score:	51.5 Category	2
		۷

Scoring Boundaries 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 and isolated from 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 Unit 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 mitigation site, conservation site, etc.	Yes	
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 other parts of a single wetland.	Yes	
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.	Yes	
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.	Yes	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	N/A	
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.	Yes	

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), <u>http://www.dnr.state.oh.us/odnr/dnap/</u>. The remaining questions are designed to be answered primarily from the results of the field 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 and 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 Reynoldsburg 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	Circle One
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2	Threatened or Endangered Species . Is the wetland known to contain an individual of, or documented occurrences of federally or state-listed threatened or endangered plant or animal species?	YES NO Wetland is a Category 3 Go to Question 3 wetland. Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES NO Wetland is a Category 3 Go to Question 4 Go to Question 4
4	Significant Breeding or Concentration Area . Does the wetland contain documented regionally significant breeding or non breeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES NO Wetland is a Category 3 Go to Question 5 wetland. Go to Question 5
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 <i>Phalaris arundunacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 Go to Question 6 Go to Question 6
6	Bogs. 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) <25%?	YES NO Wetland is a Category 3 Go to Question 7 Wetland. Go to Question 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 more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES NO Wetland is a Category 3 Go to Question 8a Wetland. Go to Question 8a

#	Question	Circle One	
8a 8b	 "Old Growth Forest." Is the wetland a forested wetland and the forest is 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 no 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? 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? 	YES Wetland is a Category 3 wetland. Go to Question 8b YES Wetland should be evaluated for possible Category 3 status.	NO Go to Question 8b NO Go to Question 9a
		Go to Question 9a	
9a	Lake Eric coastal and tributary wetlands . Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	NO 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?	YES (Wetland should be evaluated for possible Category 3 status.	NO 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.	YES (NO 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 plant species can also be present?	YES (Wetland is a Category 3 wetland.	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status. Go to Ouestion 10	NO 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.	YES (Wetland is a Category 3 wetland. Go to Question 11	NO 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, Erie County, and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, etc.).	YES (Wetland should be evaluated for possible Category 3 status. Go to Question 6	NO Complete Quantitative Rating

Table 1. Characteristic plant species.

invasive/exotic spp.	fen species	bog species	Oak Opening species	wet prairie species
invasive/exotic spp. Lythrum salicaria Myriophyllum spicatum Najas minor Phalaris arundinacea	fen species Zygadenus elegans var. glaucus Cacalia plantaginea Carex flava Carex sterilis	bog species Calla palustris Carex atlantica var. capillacea Carex echinata Carex oligosperma	Oak Opening species Carex cryptolepis Carex lasiocarpa Carex stricta Cladium mariscoides	wet prairie species Calamagrostis canadensis Calamogrostis stricta Carex atherodes Carex buxbaumii
Phragmites australis Potamogeton crispus Ranunculus ficaria Rhamnum frangula Typha angustifolia Typha xglauca	Carex stricta 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 glutinos Triglochin maritimum	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	Calamagrotis stricta Calamagrotis canadensis Quercus palustris	Carex pellita Carex sartwellii Gentiana andrewsii Helianthun grosseseerratus Liatris spicata Lysimachia quadriflora Lythrum alatum Pycnanthemum virginanum Silphium terebinthinaceum Sorghastrum nutans Spartina pectinata Solidago riddellii

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: Wetland D



Site: We	tland D		Rate	r(s): BDL	Date: 5-18-2023
38.5 Subtotal first	page				
0	38.5	Metric 5. Special Wetlands.			
max 10 pts.	Subtotal	Check all that apply and score as indicated Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetland- Lake Erie coastal/tributary wetland- Lake Plain Sand Prairies (Oak Ope Relict Wet Prairies (10) Known occurrence state/federal thr Significant migratory songbird/wate	d. -unrestrict -restricted enings) (10 reatened e er fowl hab	ed hydrology (10) hydrology (5))) endangered species (10) bitat or usage (10)	
13.0	51.5	Metric 6 Plant communities i	intersn	ersion microtono	aranhy
max 20 pts.	Subtotal	6a. Wetland Vegetation Communities Score all present using 0 to 3 scale.	Vegetat	ion Community Cover S	Scale
		Aquatic Bed 2 Emergent 2 Shrub 2 Forest	0	Absent or comprises <(Present and either com and is of moderate qua of low quality	0.1ha (0.2471 acres) contiguous area prises small part of wetland's vegetation lity, or comprises a significant part but is
		Mudflats 1 Open water Other:	2	Present and either com vegetation and is of mo and is of high quality	prises significant part of wetland's derate quality or comprises a small part
			3	Present and comprises vegetation and is of hig	significant part, or more, of wetland's h quality
		6b. horizontal (plan view) interspersion	Narrativ	e Description of Vegeta	tion Community
		High (5) Moderately high (4)	low	Low spp diversity and/c disturbance tolerant na	br predominance of nonnative or tive species
		3 Moderate (3) Moderately low (2) Low (1) None (0)	mod	Native spp are dominar nonnative and/or distur present, and species di generally w/o presence	nt component of the vegetation, although bance tolerant native spp can be versity moderate to moderately high, bu of rare threatened or endangered spp
		6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for List. Add or deduct points for coverage	high	A predominance of nati disturbance tolerant na high spp diversity, and rare, threatened, or end	ve species, with nonnative spp and/or tive spp absent or virtually absent, and often, but not always, the presence of dangered spp
		Extensive >75% cover (-5)	Mudflat	and Open Water Class	Quality
		-3 Moderate 25-75% cover (-3)	0	Absent <0.1ha (0.247 a	acres)
		Sparse 5-25% cover (-1)	1	Low 0.1 to <1ha (0.247	to 2.47 acres)
		Nearly absent <5% cover (0)	2	High 4ha (9.88 acres) of	47 to 9.88 acres) or more
		6d. Microtopography. Score all present using 0 to 3 scale.	 Microto	pography Cover Scale	
		2 Vegetated hummucks/tussucks 1 Coarse woody debris >15cm (6in)	0	Absent Present very small amo	ounts or if more common of marginal
		2 Amphibian breeding pools	2	Present in moderate an small amounts of highe	nounts, but not of highest quality or in
			3	Present in moderate or	greater amounts and of highest qualities

51.5 **GRAND TOTAL (max 100 pts)**

CATEGORY: 2

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

ORAM Summary Worksheet

		Circle or s	e answer insert core	
Narrative Rating	Question 1. Critical Habitat	YES	(NO)	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES	(NO)	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES	NO) If yes, Category 3.
	Question 4. Significant bird habitat	YES	NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES	NO	If yes, Category 1.
	Question 6. Bogs	YES	NO	If yes, Category 3.
	Question 7. Fens	YES	NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES		If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES	(NO)	If yes, evaluate for Category 3: may be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES	NO	If yes, evaluate for Category 3: may be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted	YES	NO	If yes, Category 3.
	Question 9e. Lake Erie Wetlands – Unrestricted with invasive plants	YES	NO	If yes, evaluate for Category 3: may be 1 or 2.
	Question 10. Oak Openings	YES	NO	If yes, Category 3.
	Question 11. Relict Wet Prairies	YES	NO	If yes, evaluate for Category 3: may be 1 or 2.
Quantitative Rating	Metric 1. Size		5	
	Metric 2. Buffers and surrounding land use		4	
	Metric 3. Hydrology		18	
	Metric 4. Habitat	1	1.5	
	Metric 5. Special Wetland Communities		0	
	Metric 6. Plant communities, interspersion,		13	
	TOTAL SCORE	5	51.5	Category based on score
	Consult most recent score calibration report at			breakpoints
	determine the wetland's category based on its quantitative score			Category 2

Complete Wetland Categorization Worksheet

Wetland D

Wetland Categorization Worksheet

Choices	Circle one		
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	Yes (Wetland is categorized as a Category 3 wetland	No	Is quantitative rating score <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	Yes (Wetland should be evaluated for possible Category 3 status	No	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If 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 Nos. 5	Yes (Wetland is categorized as a Category 1 wetland	No	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 ha been under-categorized by the ORAM.
Does the quantitative score fall within (the scoring range of a Category 1, 2, or 3 wetland?	Yes Wetland is assigned to the appropriate category based on the scoring range.	No	If the score of the wetland is located within the scoring range of 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 within the " <i>gray zone</i> " for Category 1 or 2 or Category 2 or 3 wetlands?	Yes (Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria.	No	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of the non-rapid 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 <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method ?	Yes (Wetland was under- categorized by this method. A written justification for recategorization should be provided on Background Information Form	No Wetland is assigned to category as determined by the ORAM.	A wetland may be under-categorized 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 regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category					
Choose one	Category 1	Category 2	Category 3		

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name:	Benjamin Latoche
Date:	5-18-2023
Affiliation:	HZW Environmental Consultants, LLC
Address:	6105 Heisley Road
Phone Number:	440-357-1260
e-mail address:	blatoche@hzwenv.com
Name of Wetland:	Wetland E
Vegetation Communit(ies):	Forested
HGM Class(es):	Depression (I) Surface Water (A)
Location of Wetland include m	ap, address, north arrow, landmarks, distances, roads, etc.
Lat/Lon or LITM Coordinate	41 239615° 91 474018°
USGS Quad Name	Hudson
County	Summit
City	Hudson
Section and Subsection	
Hydrologic Unit Code	Cuyahoga River watershed (HUC 8: 04110002)
Site Visit	Yes
National Wetland Inventory Ma	ap Yes
Ohio Wetland Inventory Map	No
Soil Survey	Yes
Delineation Report/Map	Yes

Name: Wetland E		
Wetland Size (acres, hectares)		0.13 ac
Sketch (include north arrow, relationship with other su	rface waters, vegetation	zones, etc.
Sketch (include north arrow, relationship with other su See Report.	rface waters, vegetation	zones, etc.
Comments, Narrative Discussion, Justification of Cate	gory Changes	
Final Score:48.0	Category	2

Scoring Boundaries 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 and isolated from 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 Unit 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 mitigation site, conservation site, etc.	Yes	
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 other parts of a single wetland.	Yes	
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.	Yes	
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.	Yes	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	N/A	
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.	Yes	

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), <u>http://www.dnr.state.oh.us/odnr/dnap/</u>. The remaining questions are designed to be answered primarily from the results of the field 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 and 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 Reynoldsburg 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	Circle One
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).	YES NO Wetland should be evaluated for possible Category 3 status Go to Question 2
2	Threatened or Endangered Species . Is the wetland known to contain an individual of, or documented occurrences of federally or state-listed threatened or endangered plant or animal species?	YES NO Wetland is a Category 3 Go to Question 3 wetland. Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES NO Wetland is a Category 3 Go to Question 4 Go to Question 4
4	Significant Breeding or Concentration Area . Does the wetland contain documented regionally significant breeding or non breeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES NO Wetland is a Category 3 Go to Question 5 wetland.
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 <i>Phalaris arundunacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 Go to Question 6 Go to Question 6
6	Bogs. 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) <25%?	YES NO Wetland is a Category 3 Go to Question 7 wetland. Go to Question 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 more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES NO Wetland is a Category 3 Go to Question 8a Go to Question 8a

#	Question	Circle One	
8a 8b	 "Old Growth Forest." Is the wetland a forested wetland and the forest is 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 no 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? 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? 	YES Wetland is a Category 3 wetland. Go to Question 8b YES Wetland should be evaluated for possible Category 3 status.	NO Go to Question 8b NO Go to Question 9a
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands . Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	NO 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?	YES (Wetland should be evaluated for possible Category 3 status.	NO 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.	YES (NO 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 plant species can also be present?	YES (Wetland is a Category 3 wetland.	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 10	NO 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.	YES Wetland is a Category 3 wetland. Go to Question 11	NO 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, Erie County, and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, etc.).	YES (Wetland should be evaluated for possible Category 3 status. Go to Question 6	NO Complete Quantitative Rating

Table 1. Characteristic plant species.

invasive/exotic spp.	fen species	bog species	Oak Opening species	wet prairie species
invasive/exotic spp. Lythrum salicaria Myriophyllum spicatum Najas minor Phalaris grundinacea	fen species Zygadenus elegans var. glaucus Cacalia plantaginea Carex flava Carex sterilis	bog species Calla palustris Carex atlantica var. capillacea Carex echinata Carex oligosperma	Oak Opening species Carex cryptolepis Carex lasiocarpa Carex stricta Cladium mariscoides	wet prairie species Calamagrostis canadensis Calamogrostis stricta Carex atherodes Carex buxbaumii
Phragmites australis Potamogeton crispus Ranunculus ficaria Rhamnum frangula Typha angustifolia Typha xglauca	Carex stricta 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 glutinos Triglochin maritimum	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	Calamagrotis stricta Calamagrotis canadensis Quercus palustris	Carex pellita Carex sartwellii Gentiana andrewsii Helianthun grosseserratus Liatris spicata Lysimachia quadriflora Lythrum alatum Pycnanthemum virginanum Silphium terebinthinaceum Sorghastrum nutans Spartina pectinata Solidago riddellii

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: Wetland E



Site: We	etland D		Rate	r(s): BDL	Date: 5-18-2023
40.0				• •	
43.0					
Subtotal first	page				
0	43.0				
-		Metric 5. Special Wetlands.			
max 10 pts.	Subtotal	Check all that apply and score as indicate	ed.		
		Bog (10)			
		Old growth forest (10)			
		Mature forested wetland (5)			
		Lake Erie coastal/tributary wetland	l-unrestricte	ed hydrology (10)	
		Lake Erie coastal/tributary wetland	l-restricted	hydrology (5)	
		Relict Wet Prairies (10)	enings) (10)	
		Known occurrence state/federal th	reatened e	ndangered species (10)	
		Significant migratory songbird/wate	er fowl hab	itat or usage (10)	
= 0	10.0	Category 1 Wetland. See Questio	n 1 Qualita	tive Rating (-10)	
5.0	48.0	Matria & Diant communities	intoron	noion miorotono	area by
max 20 nts	Subtotal	6a Wetland Vegetation Communities	interspe	ersion, microtopo	grapny.
max 20 pto.	oubtotal	Score all present using 0 to 3 scale.	Vegetati	on Community Cover S	cale
		Aquatic Bed	0	Absent or comprises <0	.1ha (0.2471 acres) contiguous area
		0 Emergent	1	Present and either com	prises small part of wetland's vegetation
		0 Shrub 2 Forest		of low quality	ity, or comprises a significant part but is
		Mudflats	2	Present and either com	prises significant part of wetland's
		Open water		vegetation and is of mo	derate quality or comprises a small part
		Other:		and is of high quality	significant part or many of wattend's
			3	vegetation and is of high	h quality
		6b. horizontal (plan view) interspersion	Narrativ	e Description of Vegetat	tion Community
		High (5)	low	Low spp diversity and/or	r predominance of nonnative or
		Moderately high (4)		disturbance tolerant nat	ive species
		Moderate (3)	mod	Native spp are dominan	It component of the vegetation, although
		1 Low(1)		present, and species div	versity moderate to moderately high, bu
		None (0)		generally w/o presence	of rare threatened or endangered spp
			high	A predominance of nativ	ve species, with nonnative spp and/or
		6c. Coverage of invasive plants		disturbance tolerant nat	Ive spp absent or virtually absent, and
		Refer to Table 1 ORAM long form for		rare, threatened, or end	angered spp
		List. Add or deduct points for coverage			
		Extensive >75% cover (-5)	Mudflat	and Open Water Class (Quality
		-1 Sparse 5-25% cover (-1)	1	1 ow 0.1 to <1 ha (0.247 ac)	to 2 47 acres)
		Nearly absent <5% cover (0)	2	Moderate 1 to <4ha (2.4	17 to 9.88 acres)
		Absent (1)	3	High 4ha (9.88 acres) o	r more
		6d, Microtopography.			
		Score all present using 0 to 3 scale.	Microto	pography Cover Scale	
		0 Vegetated hummucks/tussucks	0	Absent	
		Ucoarse woody debris >15cm (6in)	1	Present very small amo	unts or it more common of marginal
				<u> </u>	

3

48.0 **GRAND TOTAL (max 100 pts)**

CATEGORY: 2

Present in moderate or greater amounts and of highest qualities

small amounts of highest qualities

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

		Circle or	e answer insert core	
Narrative Rating	Question 1. Critical Habitat	YES	(NO)	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES	(NO)	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES	NO) If yes, Category 3.
	Question 4. Significant bird habitat	YES	NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES	NO	If yes, Category 1.
	Question 6. Bogs	YES	NO	If yes, Category 3.
	Question 7. Fens	YES	NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES	NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES	(NO)	If yes, evaluate for Category 3: may be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES	NO	If yes, evaluate for Category 3: may be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted	YES	NO	If yes, Category 3.
	Question 9e. Lake Erie Wetlands – Unrestricted with invasive plants	YES	NO	If yes, evaluate for Category 3: may be 1 or 2.
	Question 10. Oak Openings	YES	NO	If yes, Category 3.
	Question 11. Relict Wet Prairies	YES	NO	If yes, evaluate for Category 3: may be 1 or 2
Quantitative Rating	Metric 1. Size		1	
	Metric 2. Buffers and surrounding land use	12		
	Metric 3. Hydrology	15		
	Metric 4. Habitat	15		
	Metric 5. Special Wetland Communities	0		
	Metric 6. Plant communities, interspersion,		5	
	TOTAL SCORE		48	Category based on score
	Consult most recent score calibration report at			breakpoints
	http://www.epa.state.oh.us/dsw/401/401.html to			
	determine the wetland's category based on its quantitative score			Category 2

Complete Wetland Categorization Worksheet

Wetland E

Wetland Categorization Worksheet

Choices	Circle one		
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	Yes (Wetland is categorized as a Category 3 wetland	No	Is quantitative rating score <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	Yes (Wetland should be evaluated for possible Category 3 status	No	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If 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 Nos. 5	Yes (Wetland is categorized as a Category 1 wetland	No	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 ha been under-categorized by the ORAM.
Does the quantitative score fall within (the scoring range of a Category 1, 2, or 3 wetland?	Yes Wetland is assigned to the appropriate category based on the scoring range.	No	If the score of the wetland is located within the scoring range of 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 within the " <i>gray zone</i> " for Category 1 or 2 or Category 2 or 3 wetlands?	Yes (Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria.	No	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of the non-rapid 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 <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method ?	Yes (Wetland was under- categorized by this method. A written justification for recategorization should be provided on Background Information Form	No Wetland is assigned to category as determined by the ORAM.	A wetland may be under-categorized 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 regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

	Final	Category	
Choose one	Category 1	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

APPENDIX E

PHWH EVALUATION FORMS AND ASSOCIATED HHEI SCORES



ChieEPA Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3) : 38

SITE NAME/LOCATION OCTUATION OCTUATION OCTUATION OCTUATION	50
LENGTH OF STREAM REACH (ff) 200 LAT 41.38872 LONG -81.15746 RIVER CODE RIVER MILE	
DATE 05/18/23 SCORER CJB / BDL COMMENTS	
NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instr	uctions
MODIFICATIONS:	OVERT
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.	HHEI
TYPE PERCENT TYPE PERCENT BLDR SLABS [16 pts] 0% I SILT [3 pt] 70%	Points
BOULDER (>256 mm) [16 pts] 0% LEAF PACK/WOODY DEBRIS [3 pts] 5%	Substrate
$\square \square BEDROCK [16 pt] = 0\% \square \square FINE DETRITUS [3 pts] = 3\%$	Max = 40
□ GRAVEL (2-64 mm) [9 pts] 0% □ MUCK [0 pts] 15%	0
SAND (<2 mm) [6 pts] 5% ARTIFICIAL [3 pts] 0%	0
Total of Percentages of 0.00% (A) Substrate Percentage 100% (B)	A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3 TOTAL NUMBER OF SUBSTRATE TYPES: 5	
2 Maximum Pool Depth /Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of	Pool Depth
evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):	Max = 30
> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 22.5 - 30 cm [30 pts]	
> 10 - 22.5 cm [25 pts]	15
COMMENTS MAXIMUM POOL DEPTH (centimeters): 10	
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts] > 3.0 m $(-1.5 m (> 3' 3" - 4' 8") [15 pts]$	Width Max=30
So the 4.5 m (× 3 7 × 15) [25 pts] > 1.5 m - 3.0 m (× 9 7 " - 4' 8") [20 pts]	
COMMENTSAVERAGE BANKFULL WIDTH (meters): 1.10	15
۔ This information <u>must</u> also be completed RIPARIAN ZONE AND ELOODRI AIN OLIALITY پی که NOTE: River Left (L) and Right (R) as looking downstream ک	
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m III Mature Forest Wetland III Conservation Tillage	
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Imature Forest, Wetland Imature Forest, Shrub or Old Urban or Industrial	
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m I I Mature Forest, Wetland I Conservation Tillage I Moderate 5-10m I mmature Forest, Shrub or Old I Urban or Industrial Nearcon 65m I Paridential Dark Nam Field Open Pasture, Row Crossing	qq
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage Image: Conservation Tillage <td>qq</td>	qq
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image	-
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Image Narrow <5m	-
L R (Per Bank) L R (Most Predominant per Bank) L R Conservation Tillage Wide >10m Vide >10m	-)
L R (Per Bank) L R (Most Predominant per Bank) L R Wide >10m Vide Mature Forest, Wetland Conservation Tillage Moderate 5-10m Immature Forest, Shrub or Old Urban or Industrial Narrow <5m	- -)
L R (Per Bank) L R (Most Predominant per Bank) L R Conservation Tillage Wide >10m Immature Forest, Wetland Immature Forest, Wetland Immature Forest, Shrub or Old Impature Forest, Sh	op -)
Image: Stream Flowing Image: Stream Flowing Subsurface flow with isolated pools (Interstitial) Check ONLY one box): SINUOSITY (Number of bends per 61 m (200 ft) of channel) Check ONLY one box): SINUOSITY (Number of bends per 61 m (200 ft) of channel) Check ONLY one box):	- -)
Image: Construction of the construction Image: Construction of the construction Image: Construction of the construction Image: Construction of the construction Image: Construction of the construction Image: Construction of the construction Image: Construction of the construction Image: Construction of the construction Image: Construction of the construction Image: Construction of the construction Image: Construction of the construction Image: Construction of the construction Image: Construction of the construction Image: Construction of the construction Image: Construction of the construction Image: Construction of the construction Image: Construction of the construction Image: Construction of the construction Image: Construction of the construction Image: Construction of the construction Image: Construction of the construction Image: Construction of the construction Image: Construction of the construction Image: Construction of the construction Image: Construction of the construction Image: Construction of the construction Image: Construction of the construction Image: Construction Image: Construction of the construction Image: Construction Image: Construction of the construction Image: Construction Image: Cons	- - -

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):	
QHEI PERFORMED? - Yes 🗸 No QHEI Score (If Yes, Attach Completed QHEI Form)	
DOWNSTREAM DESIGNATED USE(S)	
WWH Name: Distance from Evaluated Stream	
CWH Name: Distance from Evaluated Stream _	_
EWH Name: Distance from Evaluated Stream	
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE <u>ENTIRE</u> WATERSHED AREA. CLEARLY MARK THE SITE LOCATION	
USGS Quadrangle Name: Hudson NRCS Soil Map Page: NRCS Soil Map Stream Order	
County: Summit Township / City: Hudson	
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Y Date of last precipitation: Quantity: 0.00	_
Photograph Information:	
Elevated Turbidity? (Y/N): Canopy (% open): 20%	
Were samples collected for water chemistry? (Y/N): (Note lab sample no. or id. and attach results) Lab Number:	
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (µmhos/cm)	
Is the sampling reach representative of the stream (Y/N) If not, please explain:	
Additional comments/description of pollution impacts:	
Performed? (Y/N): (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual) Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N Vou	he site
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed):	
Forested Wetland Growth Forest	ary h t
FLOW	
Secondary Growth Forest	
October 24, 2002 Revision	-
Save as pdf Reset Form	