



1139 South Fourth Street
Louisville, KY 40203
502.625.3009
Corporate Headquarters
6575 West Loop South, Suite 300
Bellaire, TX 77401
Main: 713.520.5400

VIA EMAIL

February 17, 2022

Mr. David Baldrige
Chief, South Branch Regulatory Division
U.S. Army Corps of Engineers
Louisville District
600 Dr. Martin Luther King, Jr. Place
Louisville, Kentucky 40202
David.E.Baldrige@usace.army.mil
CELRL.Door.To.The.Corps@usace.army.mil

**Subject: Request for Jurisdictional Determination
3500 Lees Lane Property
Jefferson County, Kentucky
Redwing Project No.: 103689**

Dear Mr. Baldrige:

On behalf of LDG Development, LLC, RES Kentucky, LLC dba Redwing Ecological Services (Redwing) is pleased to submit this Request for Jurisdictional Determination to the U.S. Army Corps of Engineers (USACE) in support of the 3500 Lees Lane Property in Louisville, Jefferson County, Kentucky. The approximately 96-acre site is located on the southwest side of Lees Lane, approximately 0.4 mile southwest of the Cane Rune Road and Lees Lane intersection (Figures 1 and 2). This report describes the location, extent, and characteristics of waters/wetlands that were delineated on the property.

Habitat on-site consists primarily of mixed-age woods (Figure 2). Jurisdictional water/wetland features identified during the field assessment include:

- six intermittent streams totaling 8,040 linear feet (0.942 acre)
- 19 ephemeral streams totaling 1,950 linear feet (0.098 acre)
- seven wetlands totaling 2.801 acres
- one open water pond measuring 0.057 acre.

Non-jurisdictional, isolated features include 13 wetlands totaling 3.396 acres and one open water pond measuring 0.029 acre (Figure 3).

METHODOLOGY

A delineation of jurisdictional waters/wetlands of the U.S. was completed by Redwing on January 5, 6, 7, and 11, 2021, using a combination of in-house research and field evaluation. In-house research included a review of the USGS topographic map, aerial photography, FEMA floodplain map, and the USDA Soil Survey Geographic Database for Jefferson County, Kentucky. Potential wetland areas were evaluated through documentation of the presence/absence of hydric soils, wetland hydrology, and hydrophytic vegetation, as defined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region – Version 2.0* (April 2012). Soil, hydrology, and vegetation data were collected on Routine Wetland Determination Data Forms for 46 points throughout the site (Figure 3), which are attached as Appendix A. The jurisdictional status of open waters, such as streams and ponds, was determined based on the presence/absence of an ordinary high water mark (OHWM), defined bed and bank features, and flow regime. The quality of the intermittent streams was assessed using the Rapid Bioassessment Protocol (RBP) as developed by the U.S. Environmental Protection Agency (USEPA) and the RBP Data Forms are attached as Appendix B. A Preliminary Jurisdictional Determination (PJD) for the jurisdictional features is provided as Appendix C and an Approved Jurisdictional Determination (AJD) Form for the isolated/non-jurisdictional features on the property is provided as Appendix D.

RESULTS

Jurisdictional water/wetland features identified during the field assessment include six intermittent streams, 19 ephemeral streams, seven wetlands, and one open water pond (Figure 3). Non-jurisdictional, isolated features include 13 wetlands and one open water pond. The water/wetland features are summarized Table 1, depicted on Figure 3, and described in more detail below.

Intermittent Streams: Six jurisdictional intermittent streams were identified on the site during the field assessment. The intermittent streams had RBP scores ranging from 61 to 100 which characterizes them as “poor” quality. Intermittent Streams 2 through 6 have a downstream connection to Intermittent Stream 1, which connects off site to Mill Creek Cutoff. Therefore, all of the intermittent streams are considered jurisdictional.

Intermittent Stream 1 enters the site from a culvert beneath Lees Lane along the northern project boundary and flows southwest for 4,230 linear feet through the central portion of the site before exiting the site at the southern project boundary. Intermittent Stream 1 is mapped as a USGS dashed blue line stream. Intermittent Stream 1 measure four to ten feet in width with one to five-foot bank heights and substrate consisting of silt, gravel, and sand. During the field assessment, Intermittent Stream 1 contained trickle flow and pooled water at one to three inches in depth.

Intermittent Stream 2 originates from Wetland 8 and flows west for 440 linear feet into Intermittent Stream 1. Intermittent 2 is three to four feet wide with half-foot bank heights and silt substrate. During the field assessment, Intermittent Stream 2 contained trickle flow in the upstream and pooled water in the downstream with water one to three inches in depth.

Intermittent Stream 3 enters the site from a culvert beneath the railroad tracks along the eastern project boundary and flows west into Intermittent Stream 1. Intermittent Stream 3 is three to six feet wide with three to ten-foot bank heights and silt substrate. During the field assessment, Intermittent 3 had pooled water throughout at one to six inches in depth.

Intermittent Stream 4 originates from Wetland 3 and flows west then south for 315 linear feet before changing classifications to ephemeral and connecting to Intermittent Stream 1. Intermittent Stream 4 is three feet wide with two to eight-foot bank heights and silt substrate. During the field assessment, Intermittent 4 had pooled water throughout at one to three inches in depth.

Intermittent Stream 5 originates from Wetland 17 and flows east for 315 linear feet into Intermittent Stream 4. Intermittent Stream 5 is two feet wide with one to three-foot bank heights and silt substrate. During the field assessment, Intermittent 5 had pooled water throughout at one to three inches in depth.

Intermittent Stream 6 originates from Ephemeral Stream 17 and flows northwest for 945 linear feet into Intermittent Stream 1. Intermittent Stream 6 is three to six feet wide with one to ten-foot bank heights and sand substrate. During the field assessment, Intermittent 6 was dry with large deposits of sand in the bed, except for a few small pools below headcuts less than one inch in depth.

Ephemeral Streams: Nineteen jurisdictional ephemeral streams were identified on the site during the field assessment. All of the ephemeral streams are directly connected to jurisdictional streams and wetlands and, are therefore considered jurisdictional. The ephemeral streams range from one to four feet wide with bank heights ranging from less than six inches to eight feet and substrates consisting primarily of silt with minimal gravel. During the field assessment, all of the ephemeral streams were dry, except for Ephemeral Streams 1, 2, 6, 10, 12, 14 and 15 which exhibited pooled water in only portions of the channel. None of the ephemeral streams exhibited groundwater influence, which confirms that they only flow in direct response to precipitation.

Open Water Ponds: One jurisdictional open water pond and one isolated/non-jurisdictional open water pond were identified on the site during the field assessment.

Open Water Pond 1 measures 0.029 acre and was constructed prior to 1955 in an area that was previously upland crop field. Open Water Pond 1 is connected to Wetland 2; however, since Wetland 2 is considered non-jurisdictional due to the lack of a downstream connection to jurisdictional waters, Open Water 2 is also non-jurisdictional.

Open Water Pond 2 measures 0.057 acre and was constructed was constructed in between 1959 and 1971 in an area that was previously upland crop field. Open Water Pond 2 is connected to Wetland 4, which drains to Intermittent Stream 1 and therefore, Open Water 2 is considered jurisdictional.

Wetlands: Seven jurisdictional wetlands totaling 2.801 acres and 13 non-jurisdictional/isolated wetlands totaling 3.396 acres were identified during the field assessment. All of the wetlands are considered

forested, except Wetlands 5 and 6 which were emergent pockets. Jurisdictional wetlands include Wetlands 3 through 8 and 17. Wetlands 3, 5, 6, 7, 8 and 17 all directly connect to intermittent streams and Wetland 4 directly connects to an ephemeral stream that connects to Wetland 5. Since these wetlands directly connect to jurisdictional waters, they are under USACE jurisdiction.

Isolated wetlands include Wetlands 1, 2, 9 through 16, 18, 19, and 20. Wetland 1 is an old pond constructed prior to 1909 and has a defined berm around the entire boundary. Wetlands 2, 9 through 16, 18, 19, and 20 are located in depressions in the woods with upland areas surrounding the entire boundary. Since these 13 wetlands are located in defined depressions with no direct or indirect connection to other water/wetland features, these wetlands are considered isolated and are not under USACE jurisdiction.

General site characteristics of soil, hydrology, and vegetation are discussed below:

Soils: The USDA Soil Survey Geographic Database for Jefferson County, Kentucky, maps the site as being primarily underlain by Otwood silt loam, Sciotoville silt loam, Urban land-Alfic Udarents complex, Weinbach silt loam, and Wheeling silt loam, with smaller areas of Robertsville silt loam and Urban land-Udorthents complex (Figure 4). Of the on-site soils, Robertsville silt loam is listed as hydric and Weinbach silt loam is listed as hydric-by-inclusion on the Jefferson County Hydric Soils List. Based on soil pits dug for the wetland determination data points, evidence of hydric soil was limited to the delineated wetlands and a few upland areas and includes the depleted matrix (F3), redox dark surface (F6), and hydrogen sulfide (A4) (Appendix A).

Hydrology: The main sources of hydrology to the site appear to be precipitation and surface runoff from adjacent properties, with some groundwater influence in the intermittent streams. The central and southern drainages on the site are located within the 100-year floodplain (Figure 5). Wetland hydrology indicators observed during the field assessment include surface water, saturation, high water table, hydrogen sulfide odor, water-stained leaves, water marks, sparsely vegetated concave surface, geomorphic position, and a positive FAC-neutral test (Appendix A).

Vegetation: The site consists primarily of a mix of upland woods and forested and emergent wetland habitat (Figures 2 and 3). Species commonly observed in the upland mixed-aged woods habitat include black locust (*Robinia pseudoacacia*), black cherry (*Prunus serotina*), sycamore (*Platanus occidentalis*), northern red oak (*Quercus rubra*), American beech (*Fagus grandifolia*), sweetgum (*Liquidambar styraciflua*), pin oak (*Quercus palustris*), slippery elm (*Ulmus rubra*), American hornbeam (*Carpinus caroliniana*), box elder (*Acer negundo*), red maple (*Acer rubrum*), bush honeysuckle (*Lonicera maackii*), multiflora rose (*Rosa multiflora*), American holly (*Ilex opaca*), common privet (*Ligustrum vulgare*), Japanese honeysuckle (*Lonicera japonica*), Allegheny blackberry (*Rubus allegheniensis*), Japanese stiltgrass (*Microstegium vimineum*), field garlic (*Allium vineale*), white snakeroot (*Ageratina altissima*), and sweet woodreed (*Cinna arundinacea*). These species are listed as obligate upland (UPL), facultative upland (FACU), facultative wetland (FACW), and facultative (FAC) on *The National Wetland Plant List: Eastern Mountains and Piedmont Final Regional Wetland Plant List – 2018* (NWPL).

Common species in the emergent wetland habitat include Japanese stiltgrass, sweet woodreed, Virginia wild rye (*Elymus virginicus*), and spearmint (*Mentha spicata*). Common species in the forested wetland habitat include pin oak, red maple, sweetgum, sycamore, slippery elm, box elder, American hornbeam, green ash (*Fraxinus pennsylvanica*), American elm (*Ulmus americana*), Japanese stiltgrass, sweet woodreed, Virginia wild rye, Japanese honeysuckle, and blunt broom

sedge (*Carex tribuloides*). These species are listed as FAC, FACW, FACU, and obligate wetland (OBL) on the NWPL.

SUMMARY


Based on the results of this delineation, jurisdictional water/wetland features identified during the field assessment include:


- six intermittent streams totaling 8,040 linear feet (0.942 acre)
- 19 ephemeral streams totaling 1,950 linear feet (0.098 acre)
- seven wetlands totaling 2.801 acres
- one open water pond measuring 0.057 acre.

Non-jurisdictional, isolated features include 13 wetlands totaling 3.396 acres and one open water pond measuring 0.029 acre. As the USACE holds final authority over determinations of the extent and location of jurisdictional waters/wetlands, we respectfully request USACE verification of delineated water/wetland boundaries and issuance of a Preliminary and Approved Jurisdictional Determination for the property.

We appreciate your review of this request. Please contact Kaitlin Ilnick or Ron Thomas at (502) 625-3009 with any questions regarding this report or the overall project.

Sincerely,


Kaitlin J. Ilnick
Project Manager II


Ronald L. Thomas (Feb 17, 2022 10:01 EST)
Ronald L. Thomas
Senior Project Manager

R:\Projects\103689-3500 Lees Lane\Reports\JD Report\Request for JD- 3500 Lees Lane.docx

cc: Mr. Elijah Lacey – LDG Development, LLC

Attachments: Table
Figures
Photographs
Appendix A: Wetland Determination Data Forms
Appendix B: Rapid Bioassessment Protocol Forms
Appendix C: Preliminary Jurisdictional Determination Form
Appendix D: Approved Jurisdictional Determination Form

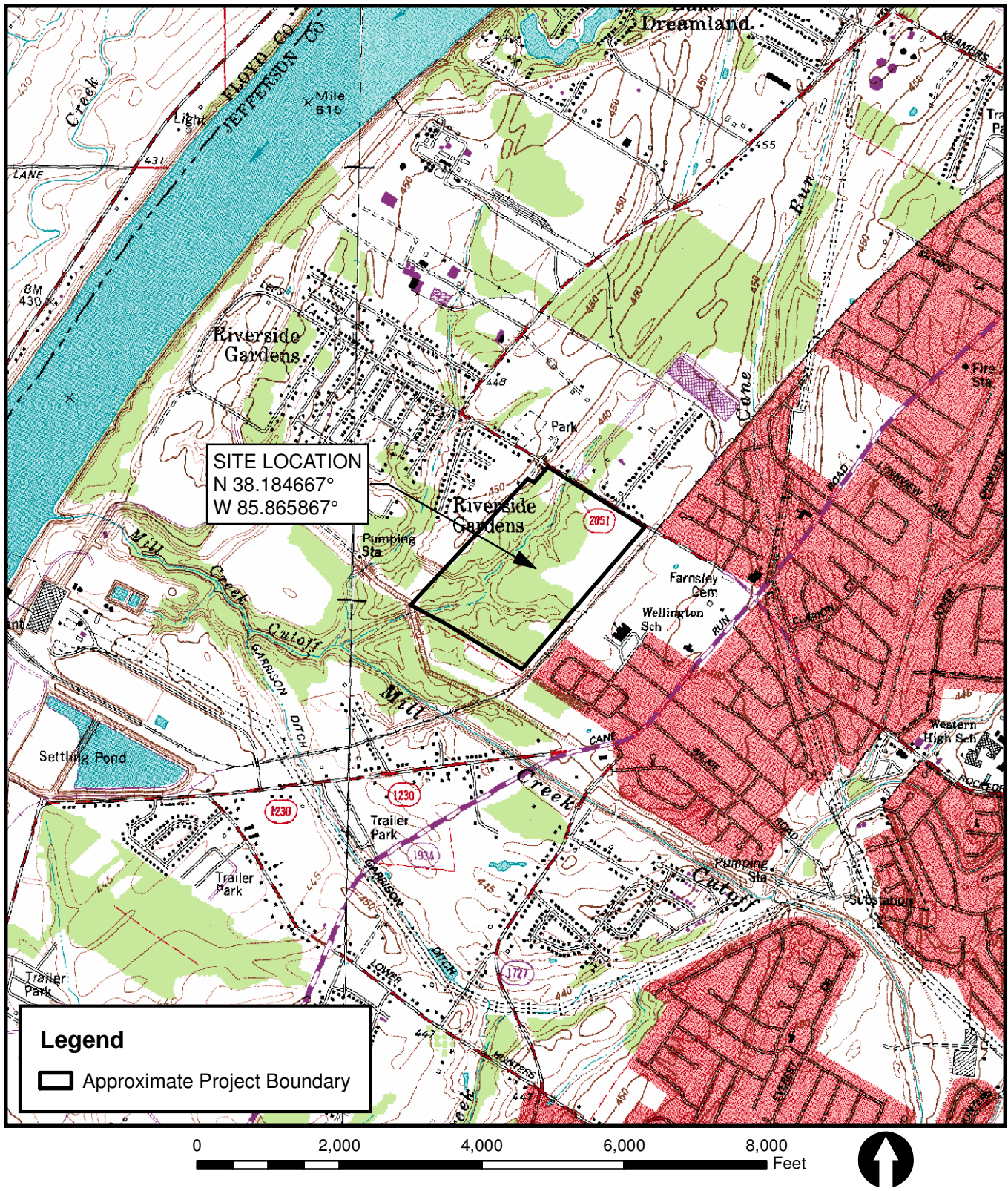
TABLE

**Table 1: Water/Wetland Summary
3500 Lees Lane Property
Jefferson County, Kentucky**

Feature	Stream Length (feet)	Stream Width (feet)	Area (acres)	Federal Status
Intermittent Stream 1	4,230	6	0.583	Jurisdictional
Intermittent Stream 2	440	4	0.040	Jurisdictional
Intermittent Stream 3	1,795	4.5	0.185	Jurisdictional
Intermittent Stream 4	315	3	0.022	Jurisdictional
Intermittent Stream 5	315	2	0.014	Jurisdictional
Intermittent Stream 6	945	4.5	0.098	Jurisdictional
Intermittent Stream Total	8,040		0.942	
Ephemeral Stream 1	90	1.5	0.003	Jurisdictional
Ephemeral Stream 2	175	2	0.008	Jurisdictional
Ephemeral Stream 3	25	1.5	0.001	Jurisdictional
Ephemeral Stream 4	125	1.5	0.004	Jurisdictional
Ephemeral Stream 5	65	1.5	0.002	Jurisdictional
Ephemeral Stream 6	135	2	0.006	Jurisdictional
Ephemeral Stream 7	135	2	0.006	Jurisdictional
Ephemeral Stream 8	65	1	0.001	Jurisdictional
Ephemeral Stream 9	35	1.5	0.001	Jurisdictional
Ephemeral Stream 10	60	1	0.001	Jurisdictional
Ephemeral Stream 11	30	1.5	0.001	Jurisdictional
Ephemeral Stream 12	140	3	0.010	Jurisdictional
Ephemeral Stream 13	105	1.5	0.004	Jurisdictional
Ephemeral Stream 14	50	2.5	0.003	Jurisdictional
Ephemeral Stream 15	85	2	0.004	Jurisdictional
Ephemeral Stream 16	45	2	0.002	Jurisdictional
Ephemeral Stream 17	475	3.5	0.038	Jurisdictional
Ephemeral Stream 18	85	1	0.002	Jurisdictional
Ephemeral Stream 19	25	1	0.001	Jurisdictional
Ephemeral Stream Total	1,950		0.098	
Wetland 1	---	---	0.174	Non-Jurisdictional
Wetland 2	---	---	1.457	Non-Jurisdictional
Wetland 3	---	---	0.875	Jurisdictional
Wetland 4	---	---	1.596	Jurisdictional
Wetland 5	---	---	0.046	Jurisdictional
Wetland 6	---	---	0.007	Jurisdictional
Wetland 7	---	---	0.063	Jurisdictional
Wetland 8	---	---	0.172	Jurisdictional
Wetland 9	---	---	0.108	Non-Jurisdictional
Wetland 10	---	---	0.667	Non-Jurisdictional
Wetland 11	---	---	0.017	Non-Jurisdictional
Wetland 12	---	---	0.049	Non-Jurisdictional
Wetland 13	---	---	0.459	Non-Jurisdictional
Wetland 14	---	---	0.270	Non-Jurisdictional
Wetland 15	---	---	0.059	Non-Jurisdictional
Wetland 16	---	---	0.040	Non-Jurisdictional
Wetland 17	---	---	0.042	Jurisdictional
Wetland 18	---	---	0.026	Non-Jurisdictional
Wetland 19	---	---	0.049	Non-Jurisdictional
Wetland 20	---	---	0.021	Non-Jurisdictional
Jurisdictional Wetland Total	---	---	2.801	
Non-Jurisdictional Wetland Total	---	---	3.396	
Open Water 1	---	---	0.029	Non-Jurisdictional
Open Water 2	---	---	0.057	Jurisdictional
Jurisdictional Open Water Total	---	---	0.057	
Non-Jurisdictional Open Water Total	---	---	0.029	
Jurisdictional Features Total	9,990		3.898	

FIGURES

Source: USGS 7.5-minute Topographic Map - Lanesville, Indiana and Louisville West, Kentucky Quadrangles.



3500 LEES LANE PROPERTY
JEFFERSON COUNTY, KENTUCKY



SITE LOCATION MAP

REVISED DATE: 01-31-22 | DRAWN BY: BJD/CDS

Received Dec. 5, 2022

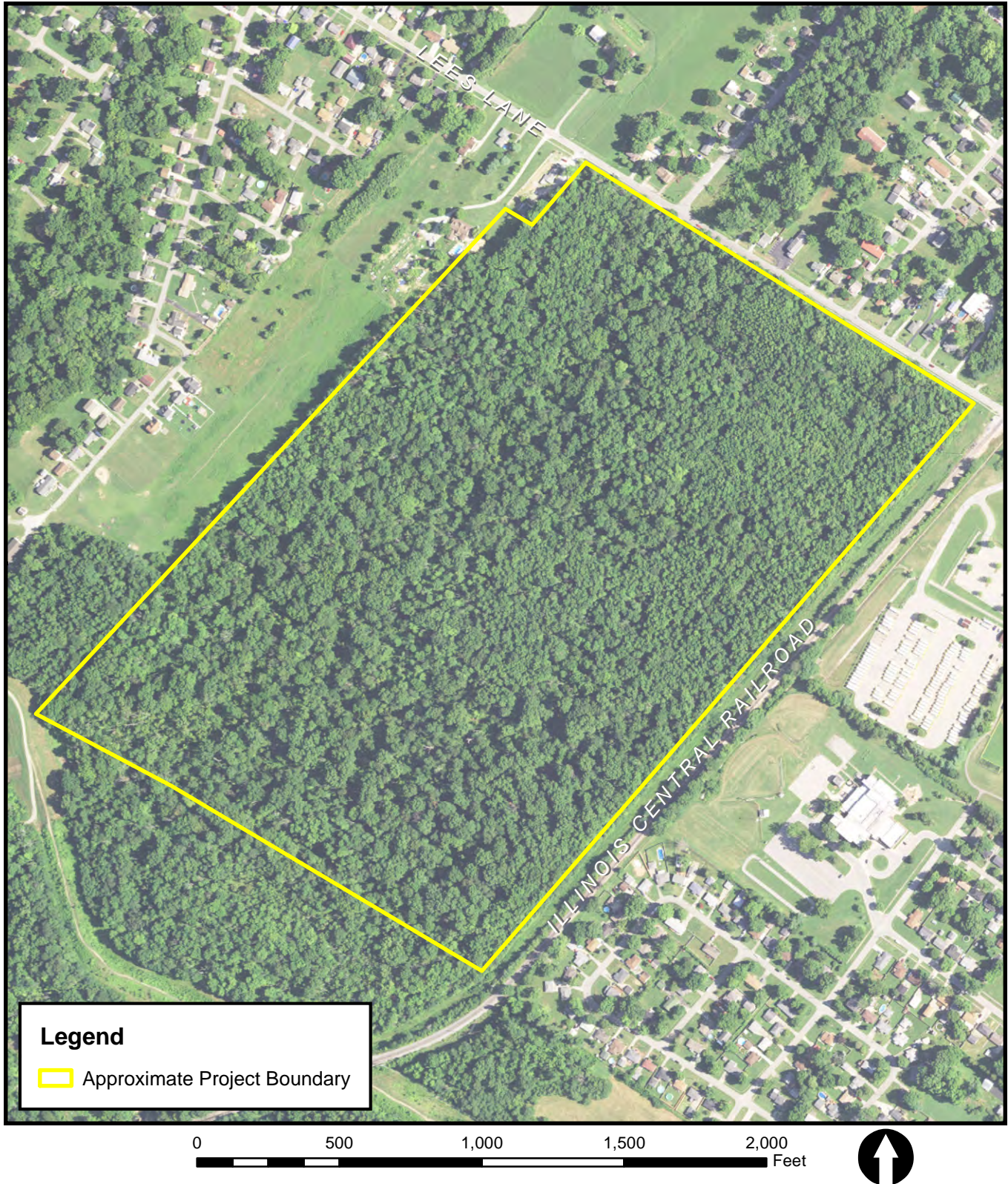
Planning & Design

22-ZONE-0013

FIGURE 1


R:\Projects\103689-3500 Lees Lane\Figures\Site Location Map - Copy.mxd, 01-31-2022, temp

Source: Aerial - (NAIP-FSA) from kygisserver.ky.gov ArcGIS services (2018).



R:\Projects\103689-3500 Lees Lane\Figures\Aerial Map.mxd, 01-31-2022, temp

Legend

 Approximate Project Boundary

3500 LEES LANE PROPERTY
JEFFERSON COUNTY, KENTUCKY



AERIAL MAP

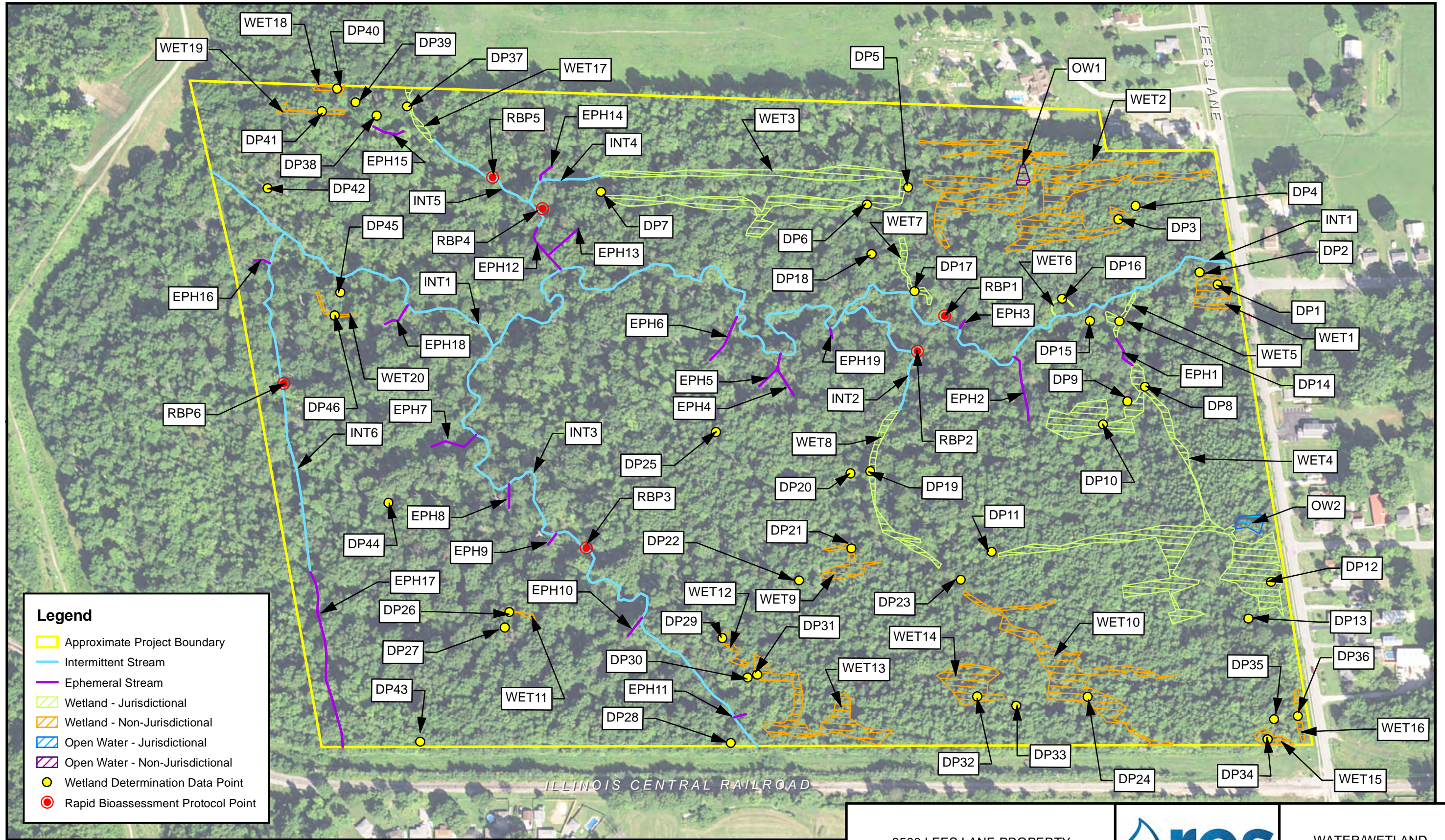
REVISED DATE: 01-31-22 | DRAWN BY: BJD/CDS

Received Dec. 5, 2022

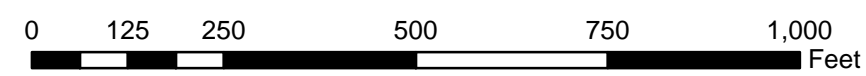
Planning & Design

22-ZONE-0013

FIGURE 2



R:\Projects\103689-3500 Lees Lane\Figures\Water\Wetland.mxd, 02-2-2022, temp



NOTE: JURISDICTIONAL WATER/WETLAND BOUNDARIES WERE DELINEATED AND SURVEYED BY RES WETLAND SCIENTISTS ON JANUARY 5-7 AND 11, 2021. THESE BOUNDARIES HAVE NOT BEEN VERIFIED BY THE U.S. ARMY CORPS OF ENGINEERS. USE OF THIS MAP IS FOR PRELIMINARY PLANNING PURPOSES ONLY.



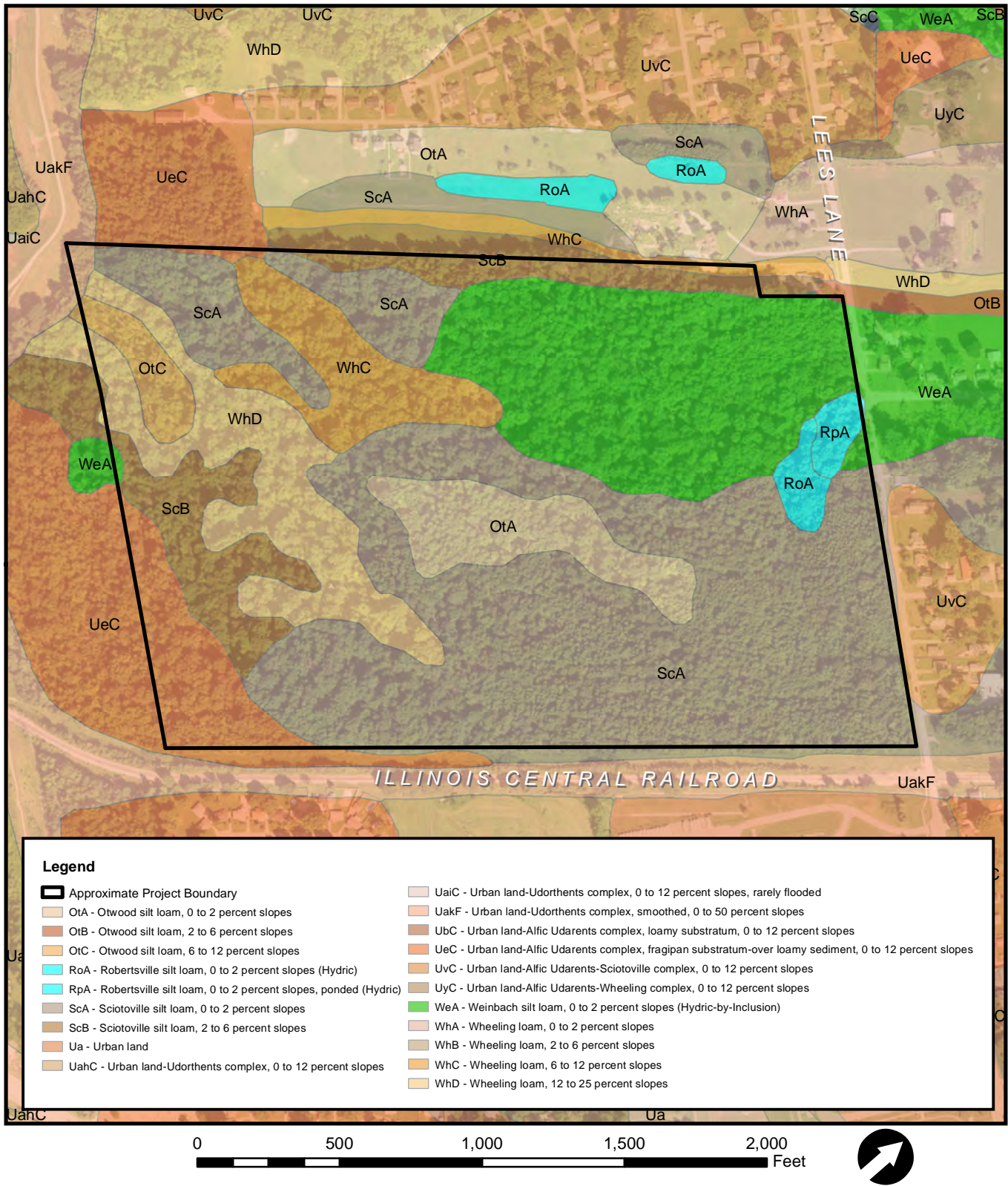
3500 LEES LANE PROPERTY JEFFERSON COUNTY, KENTUCKY			WATER/WETLAND LOCATION MAP
REVISED DATE: 01-31-22	DRAWN BY: EDB/BJD/CDS		

Received Dec. 5, 2022

Planning & Design

22-ZONE-0013

Source: Soil Survey Geographic (SSURGO) database for Jefferson County, Kentucky (2008); Aerial - (NAIP-FSA) from kygissserver.ky.gov ArcGIS services (2018).



R:\Projects\103689-3500 Lees Lane\Figures\Soils Map.mxd, 02-8-2022, ebowman

3500 LEES LANE PROPERTY
JEFFERSON COUNTY, KENTUCKY



SOIL SURVEY MAP

REVISED DATE: 02-08-22 | DRAWN BY: EDB/CDS

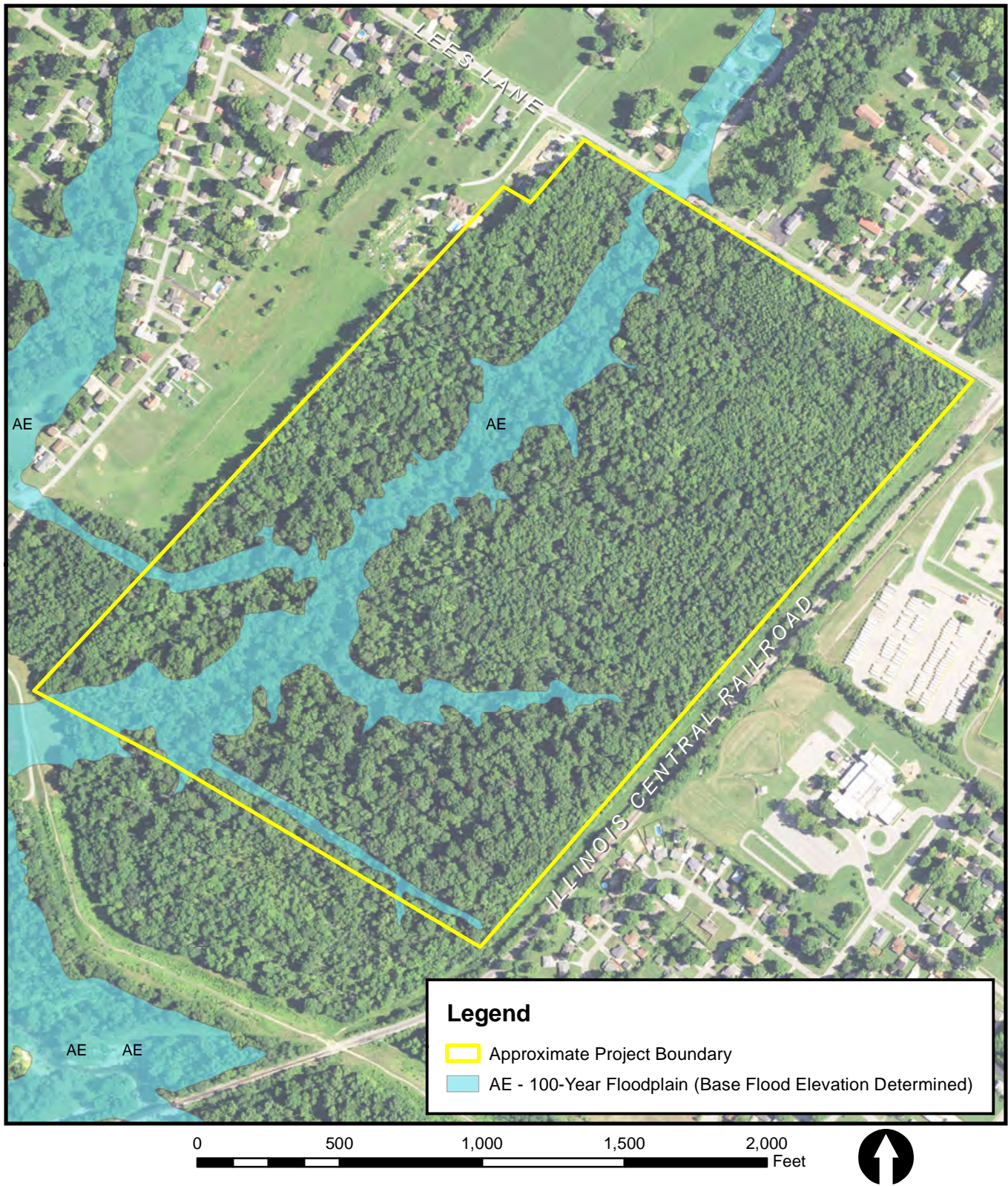
FIGURE 4

Received Dec. 5, 2022

Planning & Design

22-ZONE-0013

Source: FEMA National Flood Hazard Layer (NFHL) (2015); Aerial - (NAIP-FSA) from kygisserver.ky.gov ArcGIS services (2018).



R:\Projects\103689-3500 Lees Lane\Figures\FEMA Map.mxd, 02-8-2022, ebowman

3500 LEES LANE PROPERTY
JEFFERSON COUNTY, KENTUCKY



FEMA FLOODPLAIN MAP

REVISED DATE: 02-08-22 | DRAWN BY: BJD/CDS

FIGURE 5

Received Dec. 5, 2022

Planning & Design

22-ZONE-0013

PHOTOGRAPHS



Photograph 1: The upstream portion of Intermittent Stream 1, facing downstream. January 5, 2021.



Photograph 2: The downstream portion of Intermittent Stream 1, facing downstream. January 11, 2021.



Photograph 3: Intermittent Stream 2, facing upstream. January 6, 2021.



Photograph 4: Intermittent Stream 3, facing upstream. January 7, 2021.



Photograph 5: Intermittent Stream 4, facing upstream. January 7, 2021.



Photograph 6: Intermittent Stream 5, facing downstream. January 7, 2021.



Photograph 7: Intermittent Stream 6, facing upstream. January 11, 2021.



Photograph 8: Ephemeral Stream 1, facing downstream below the old pond portion of Wetland 4. January 6, 2021.



Photograph 9: Ephemeral Stream 2, facing upstream. January 6, 2021.



Photograph 10: Ephemeral Stream 3, facing upstream. January 6, 2021.



Photograph 11: Ephemeral Stream 4, facing upstream. January 7, 2021.



Photograph 12: Ephemeral Stream 5, facing upstream. January 7, 2021.



Photograph 13: Ephemeral Stream 6, facing downstream. January 7, 2021.



Photograph 14: Ephemeral Stream 7, facing upstream. January 7, 2021.



Photograph 15: Ephemeral Stream 8, facing upstream. January 7, 2021.



Photograph 16: Ephemeral Stream 9, facing upstream near the confluence with Intermittent Stream 3. January 7, 2021.



Photograph 17: Ephemeral Stream 10, facing downstream. January 7, 2021.



Photograph 18: Ephemeral Stream 11, facing upstream. January 7, 2021.



Photograph 19: Ephemeral Stream 12, facing upstream. January 7, 2021.



Photograph 20: Ephemeral Stream 13, facing upstream. January 7, 2021.



Photograph 21: Ephemeral Stream 14, facing upstream. January 7, 2021.



Photograph 22: Ephemeral Stream 15, facing downstream. January 11, 2021.



Photograph 23: Ephemeral Stream 16, facing upstream. January 11, 2021.



Photograph 24: Ephemeral Stream 17, facing upstream. January 11, 2021.



Photograph 25: Ephemeral Stream 18, facing upstream. January 11, 2021.



Photograph 26: Ephemeral Stream 19, facing upstream. January 7, 2021.



Photograph 27: Wetland 1 in an old pond in the northern portion of the site. January 5, 2021.



Photograph 28: Wetland 2 in the northwestern portion of the site. January 5, 2021.



Photograph 29: Wetland 3 in the western portion of the site. January 5, 2021.



Photograph 30: Portion of Wetland 4 in an old pond that outlets to Ephemeral Stream 1. January 5, 2021.



Photograph 31: Wetland 4 in the northern portion of the site. January 6, 2021.



Photograph 32: Wetland 5 in the northern portion of the site below Ephemeral Stream 1. January 6, 2021.



Photograph 33: Wetland 6 in the northern portion of the site near Intermittent Stream 1. January 6, 2021.



Photograph 34: Wetland 7 in a drainage on the west side of Intermittent Stream 1. January 6, 2021.



Photograph 35: Wetland 8 in a broad drainage upstream of Intermittent Stream 2. January 6, 2021.



Photograph 36: Wetland 9 in the eastern portion of the site. January 6, 2021.



Photograph 37: Wetland 10 in the northeastern portion of the site.
January 6, 2021.



Photograph 38: Wetland 11 in the southeastern portion of the site.
January 7, 2021.



Photograph 39: Wetland 12 in the eastern portion of the site.
January 7, 2021.



Photograph 40: Wetland 13 in the eastern portion of the site.
January 7, 2021.



Photograph 41: Wetland 14 in the eastern portion of the site.
January 7, 2021.



Photograph 42: Wetland 15 in the northeastern corner of the site.
January 7, 2021.



Photograph 43: Wetland 16 in the northeastern corner of the site along Lees Lane. January 7, 2021.



Photograph 44: Wetland 17 in the southwestern portion of the site upstream of Intermittent Stream 5. January 11, 2021.



Photograph 45: Wetland 18 in the southwestern portion of the site. January 11, 2021.



Photograph 46: Wetland 19 in the southwestern portion of the site. January 11, 2021.



Photograph 47: Wetland 20 in the southern portion of the site. January 11, 2021.



Photograph 48: Open Water Pond 1, adjacent to Wetland 2 in the northwestern portion of the site. January 5, 2021.



Photograph 49: Open Water Pond 2, adjacent to Wetland 4 in the northern portion of the site. January 6, 2021.



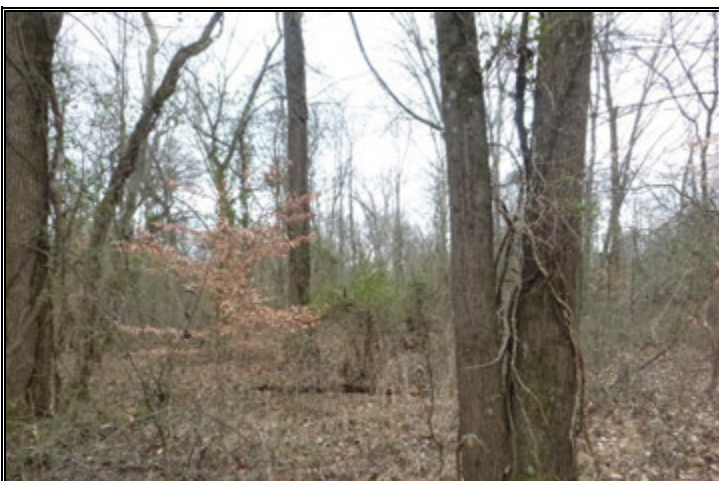
Photograph 50: Upland area in between Wetlands 8 and 10. January 6, 2021.



Photograph 51: Upland area in between Wetland 19 and Ephemeral Stream 29. January 11, 2021.



Photograph 52: Mixed-age upland woods in the northern portion of the site. January 5, 2021.



Photograph 53: Mixed-age upland woods in the central portion of the site. January 5, 2021.



Photograph 54: Mixed-age upland woods in the southern portion of the site. This area seems to have been disturbed by past logging. January 11, 2021.

APPENDIX A

WETLAND DETERMINATION DATA FORMS

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/5/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP1
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.188021 Long.: -85.864479 Datum: _____
 Soil Map Unit Name: RpA - Robertsville silt loam, 0 to 2 percent slopes, ponded (Hydric) NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>Yes</u> Wetland hydrology present? <u>Yes</u>	Is the Sampled Area within a Wetland? <u>Yes</u>
--	--

Remarks: (Explain alternative procedures here or in a separate report.)
 Data point for Wetland 1.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes <u>X</u> No _____ Depth (inches): <u>1-4</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>Yes</u>
---	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP1

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Quercus palustris</i>		60	Yes	FACW
2	<i>Acer rubrum</i>		30	Yes	FAC
3					
4					
5					
6					
7					
8					
9					
10					
			90	=	Total Cover

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
			0	=	Total Cover

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Carex tribuloides</i>		5	Yes	FACW
2	<i>Lonicera japonica</i>		3	Yes	FACU
3	<i>Elymus virginicus</i>		3	Yes	FACW
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			11	=	Total Cover

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		10	Yes	FACU
2					
3					
4					
5					
			10	=	Total Cover

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across all Strata: 6 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 66.67% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

1 - Rapid test for hydrophytic vegetation

X 2 - Dominance test is >50%

3 - Prevalence index is ≤3.0*

4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	2.5Y 5/1	90	10YR 4/6	10	C	M	clay	
3-8	2.5Y 5/2	80	10YR 4/6	15	C	M	clay	
			2.5Y 4/3	5	C	M		
8-14	2.5Y 5/2	70	5YR 4/6	30	C	M	clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils:

- | | | |
|--|---|---|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> (MLRA 147, 148) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| <input type="checkbox"/> Stratified Layers (A5) | <input checked="" type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> (MLRA 136, 147) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR,N | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N | |
| <input type="checkbox"/> MLRA 147, 148) | <input type="checkbox"/> MLRA 136) | |
| <input type="checkbox"/> Sandy Gley Matrix (S4) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) | |

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric soil present? Yes

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/5/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP2
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): berm Local relief (concave, convex, none): concave Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.187978 Long.: -85.864675 Datum: _____
 Soil Map Unit Name: WeA - Weinbach silt loam, 0 to 2 percent slopes (Hydric-by-Inclusion) NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u> </u> No Hydric soil present? <u> </u> No Wetland hydrology present? <u> </u> No	Is the Sampled Area within a Wetland? <u> </u> No
--	--

Remarks: (Explain alternative procedures here or in a separate report.)
 Old pond berm. Upland data point to Wetland 1.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes <u> </u> No <u> X </u> Depth (inches): <u> </u> N/A Water table present? Yes <u> </u> No <u> X </u> Depth (inches): <u> </u> N/A Saturation present? Yes <u> </u> No <u> X </u> Depth (inches): <u> </u> N/A (includes capillary fringe)	Wetland hydrology present? <u> </u> No
--	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP2

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Prunus serotina</i>		30	Yes	FACU
2	<i>Robinia pseudoacacia</i>		20	Yes	FACU
3	<i>Carpinus caroliniana</i>		20	Yes	FAC
4	<i>Quercus rubra</i>		20	Yes	FACU
5					
6					
7					
8					
9					
10					
			90	=	Total Cover

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Ligustrum vulgare</i>		15	Yes	FACU
2	<i>Lonicera maackii</i>		15	Yes	UPL
3	<i>Rosa multiflora</i>		5	No	FACU
4					
5					
6					
7					
8					
9					
10					
			35	=	Total Cover

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		20	Yes	FACU
2	<i>Carex blanda</i>		10	Yes	FAC
3	<i>Elymus virginicus</i>		3	No	FACW
4	<i>Ageratina altissima</i>		3	No	FACU
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			36	=	Total Cover

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1					
2					
3					
4					
5					
			0	=	Total Cover

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across all Strata: 8 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 25.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

____ 1 - Rapid test for hydrophytic vegetation

____ 2 - Dominance test is >50%

____ 3 - Prevalence index is ≤3.0*

____ 4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? No

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

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/5/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP3
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.187772 Long.: -85.865534 Datum: _____
 Soil Map Unit Name: WeA - Weinbach silt loam, 0 to 2 percent slopes (Hydric-by-Inclusion) NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>Yes</u> Wetland hydrology present? <u>Yes</u>	Is the Sampled Area within a Wetland? <u>Yes</u>
--	--

Remarks: (Explain alternative procedures here or in a separate report.)
 Data point for Wetland 2.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes <u>X</u> No <u> </u> Depth (inches): <u>6-10</u> (includes capillary fringe)	Wetland hydrology present? <u>Yes</u>
--	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP3

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		85	Yes	FAC
2					
3					
4					
5					
6					
7					
8					
9					
10					
			85 =	Total Cover	

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Liquidambar styraciflua</i>		15	Yes	FAC
2					
3					
4					
5					
6					
7					
8					
9					
10					
			15 =	Total Cover	

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Cinna arundinacea</i>		20	Yes	FACW
2	<i>Glechoma hederacea</i>		10	Yes	FACU
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			30 =	Total Cover	

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1					
2					
3					
4					
5					
			0 =	Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across all Strata: 4 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 75.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

1 - Rapid test for hydrophytic vegetation

2 - Dominance test is >50%

3 - Prevalence index is ≤3.0*

4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

_____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	2.5Y 5/2	90	7.5YR 4/6	10	C	M	silty clay loam	
3-10	2.5YR 5/2	90	2.5Y 6/1	5	D	M	silt loam	
			7.5YR 4/6	5	C	M		
10-14	2.5Y 6/3	90	2.5Y 6/1	5	D	M	clay	
			2.5Y 5/6	5	C	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils:

- | | | |
|--|---|---|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> (MLRA 147, 148) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| <input type="checkbox"/> Stratified Layers (A5) | <input checked="" type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> (MLRA 136, 147) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR,N | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N | |
| <input type="checkbox"/> MLRA 147, 148) | <input type="checkbox"/> MLRA 136) | |
| <input type="checkbox"/> Sandy Gley Matrix (S4) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) | |

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: clay
 Depth (inches): 10

Hydric soil present? Yes

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/5/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP4
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.187931 Long.: -85.865525 Datum: _____
 Soil Map Unit Name: WeA - Weinbach silt loam, 0 to 2 percent slopes (Hydric-by-Inclusion) NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u> No </u> Hydric soil present? <u> No </u> Wetland hydrology present? <u> No </u>	Is the Sampled Area within a Wetland? <u> No </u>
---	---

Remarks: (Explain alternative procedures here or in a separate report.)
 Upland data point to Wetland 2

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Water table present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Saturation present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> (includes capillary fringe)	Wetland hydrology present? <u> No </u>
---	--

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP4

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		80	Yes	FAC
2	<i>Ulmus rubra</i>		20	Yes	FAC
3					
4					
5					
6					
7					
8					
9					
10					
			100	=	Total Cover

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera maackii</i>		5	Yes	UPL
2	<i>Rosa multiflora</i>		3	Yes	FACU
3	<i>Ligustrum vulgare</i>		3	Yes	FACU
4					
5					
6					
7					
8					
9					
10					
			11	=	Total Cover

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Glechoma hederacea</i>		30	Yes	FACU
2	<i>Lonicera japonica</i>		15	Yes	FACU
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			45	=	Total Cover

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1					
2					
3					
4					
5					
			0	=	Total Cover

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across all Strata: 7 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 28.57% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

____ 1 - Rapid test for hydrophytic vegetation

____ 2 - Dominance test is >50%

____ 3 - Prevalence index is ≤3.0*

____ 4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? No

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

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/5/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP5
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.186748 Long.: -85.867014 Datum: _____
 Soil Map Unit Name: WeA - Weinbach silt loam, 0 to 2 percent slopes (Hydric-by-Inclusion) NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u> No </u> Hydric soil present? <u> No </u> Wetland hydrology present? <u> No </u>	Is the Sampled Area within a Wetland? <u> No </u>
---	---

Remarks: (Explain alternative procedures here or in a separate report.)
 Upland data point for Wetlands 2 and 3.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Water table present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Saturation present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> (includes capillary fringe)	Wetland hydrology present? <u> No </u>
---	--

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP5

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Robinia pseudoacacia</i>		35	Yes	FACU
2	<i>Acer rubrum</i>		15	Yes	FAC
3	<i>Fagus grandifolia</i>		15	Yes	FACU
4	<i>Ulmus rubra</i>		15	Yes	FAC
5	<i>Celtis occidentalis</i>		10	No	FACU
6	<i>Juniperus virginiana</i>		5	No	FACU
7					
8					
9					
10					
			95	=	Total Cover

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Rosa multiflora</i>		20	Yes	FACU
2					
3					
4					
5					
6					
7					
8					
9					
10					
			20	=	Total Cover

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Microstegium vimineum</i>		50	Yes	FAC
2	<i>Lonicera japonica</i>		20	Yes	FACU
3	<i>Rubus allegheniensis</i>		20	Yes	FACU
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			90	=	Total Cover

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		30	Yes	FACU
2					
3					
4					
5					
			30	=	Total Cover

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across all Strata: 9 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 33.33% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

____ 1 - Rapid test for hydrophytic vegetation

____ 2 - Dominance test is >50%

____ 3 - Prevalence index is ≤3.0*

____ 4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? No

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

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/5/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP6
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.186436 Long.: -85.867139 Datum: _____
 Soil Map Unit Name: WeA - Weinbach silt loam, 0 to 2 percent slopes (Hydric-by-Inclusion) NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>Yes</u> Wetland hydrology present? <u>Yes</u>	Is the Sampled Area within a Wetland? <u>Yes</u>
--	--

Remarks: (Explain alternative procedures here or in a separate report.)
 Data point for Wetland 3.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes <u>X</u> No _____ Depth (inches): <u>0-2</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>Yes</u>
---	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP6

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		85	Yes	FAC
2	<i>Fraxinus pennsylvanica</i>		5	No	FACW
3					
4					
5					
6					
7					
8					
9					
10					
			90	=	Total Cover

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		10	Yes	FAC
2					
3					
4					
5					
6					
7					
8					
9					
10					
			10	=	Total Cover

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Cinna arundinacea</i>		20	Yes	FACW
2	<i>Rosa multiflora</i>		5	Yes	FACU
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			25	=	Total Cover

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		15	Yes	FACU
2					
3					
4					
5					
			15	=	Total Cover

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across all Strata: 5 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 60.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

1 - Rapid test for hydrophytic vegetation

2 - Dominance test is >50%

3 - Prevalence index is ≤3.0*

4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

SOIL

Sampling Point: DP6

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-14	2.5Y 6/1	70	10YR 5/8	30	C	M	clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils:

- | | | |
|---|--|--|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> (MLRA 147, 148) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| <input type="checkbox"/> Stratified Layers (A5) | <input checked="" type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> (MLRA 136, 147) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR,N) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N) | |
| <input type="checkbox"/> MLRA 147, 148) | <input type="checkbox"/> MLRA 136) | |
| <input type="checkbox"/> Sandy Gley Matrix (S4) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) | |

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric soil present? Yes

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/5/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP7
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.18501 Long.: -85.86881 Datum: _____
 Soil Map Unit Name: ScA - Sciotoville silt loam, 0 to 2 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>No</u> Wetland hydrology present? <u>No</u>	Is the Sampled Area within a Wetland? <u>No</u>
--	---

Remarks: (Explain alternative procedures here or in a separate report.)
 Upland data point to Wetland 3.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>No</u>
---	--

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP7

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Liquidambar styraciflua</i>		80	Yes	FAC
2	<i>Acer rubrum</i>		20	Yes	FAC
3					
4					
5					
6					
7					
8					
9					
10					
			100 =	Total Cover	

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lindera benzoin</i>		30	Yes	FAC
2	<i>Rosa multiflora</i>		20	Yes	FACU
3					
4					
5					
6					
7					
8					
9					
10					
			50 =	Total Cover	

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		30	Yes	FACU
2	<i>Microstegium vimineum</i>		15	Yes	FAC
3	<i>Rubus allegheniensis</i>		5	No	FACU
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			50 =	Total Cover	

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		50	Yes	FACU
2					
3					
4					
5					
			50 =	Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across all Strata: 7 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 57.14% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

1 - Rapid test for hydrophytic vegetation

2 - Dominance test is >50%

3 - Prevalence index is ≤3.0*

4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/5/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP8
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.187133 Long.: -85.864189 Datum: _____
 Soil Map Unit Name: RoA - Robertsville silt loam, 0 to 2 percent slopes (Hydric) NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>Yes</u> Wetland hydrology present? <u>Yes</u>	Is the Sampled Area within a Wetland? <u>Yes</u>
--	--

Remarks: (Explain alternative procedures here or in a separate report.)
 Data point to Wetland 4. Data point taken near portion of Wetland 4 that is an old man-made pond.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes <u>X</u> No _____ Depth (inches): <u>1-3</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>Yes</u>
---	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP8

Tree Stratum	Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Ulmus rubra</i>	20	Yes	FAC
2				
3				
4				
5				
6				
7				
8				
9				
10				
		20 =	Total Cover	

Sapling/Shrub Stratum	Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
		0 =	Total Cover	

Herb Stratum	Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Microstegium vimineum</i>	5	Yes	FAC
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		5 =	Total Cover	

Woody Vine Stratum	Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
		0 =	Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

 1 - Rapid test for hydrophytic vegetation

 X 2 - Dominance test is >50%

 3 - Prevalence index is ≤3.0*

 4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

 Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	2.5Y 4/2	90	5YR 4/4	10	C	M	silty clay loam	
3-5	2.5Y 4/1	85	5YR 4/4	10	C	M	silty clay loam	
			5YR 5/6	5	C	M		
5-14	2.5Y 5/2	70	5YR 4/6	15	C	M	clay	
			5YR 5/6	10	C	M		
			2.5Y 4/1	5	D	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils:

- | | | |
|--|---|---|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> (MLRA 147, 148) |
| <input checked="" type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| <input type="checkbox"/> Stratified Layers (A5) | <input checked="" type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> (MLRA 136, 147) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR,N | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N | |
| <input type="checkbox"/> MLRA 147, 148) | <input type="checkbox"/> MLRA 136) | |
| <input type="checkbox"/> Sandy Gley Matrix (S4) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) | |

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric soil present? Yes

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/5/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP9
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.186967 Long.: -85.86419 Datum: _____
 Soil Map Unit Name: RoA - Robertsville silt loam, 0 to 2 percent slopes (Hydric) NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>No</u> Hydric soil present? <u>No</u> Wetland hydrology present? <u>No</u>	Is the Sampled Area within a Wetland? <u>No</u>
---	---

Remarks: (Explain alternative procedures here or in a separate report.)
 Upland data point to Wetland 4.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>No</u>
---	--

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP9

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		40	Yes	FAC
2	<i>Prunus serotina</i>		20	Yes	FACU
3	<i>Liriodendron tulipifera</i>		10	No	FACU
4					
5					
6					
7					
8					
9					
10					
			70	=	Total Cover

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Rosa multiflora</i>		10	Yes	FACU
2	<i>Celtis occidentalis</i>		10	Yes	FACU
3					
4					
5					
6					
7					
8					
9					
10					
			20	=	Total Cover

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Microstegium vimineum</i>		70	Yes	FAC
2	<i>Lonicera japonica</i>		10	No	FACU
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			80	=	Total Cover

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		25	Yes	FACU
2					
3					
4					
5					
			25	=	Total Cover

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across all Strata: 6 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 33.33% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

____ 1 - Rapid test for hydrophytic vegetation

____ 2 - Dominance test is >50%

____ 3 - Prevalence index is ≤3.0*

____ 4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? No

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

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	2.5Y 4/3	97	10YR 5/6	3	C	M	silty clay	
4-10	2.5Y 5/3	90	10YR 5/6	5	C	M	silt loam	
			2.5Y 6/4	5	C	M		
10-14	2.5Y 5/3	75	2.5Y 6/6	25	C	M	clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

<p>Hydric Soil Indicators:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Histisol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) (LRR N) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR,N MLRA 147, 148) <input type="checkbox"/> Sandy Gley Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) 	<p>Indicators for Problematic Hydric Soils:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S9) (MLRA 147, 148) <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N MLRA 136) <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) 	<ul style="list-style-type: none"> <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks) <p>*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic</p>
--	---	--

<p>Restrictive Layer (if observed): Type: _____ Depth (inches): _____</p>	<p>Hydric soil present? <u> No </u></p>
--	---

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/6/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP10
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.186722 Long.: -85.864173 Datum: _____
 Soil Map Unit Name: ScA - Sciotoville silt loam, 0 to 2 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>Yes</u> Wetland hydrology present? <u>Yes</u>	Is the Sampled Area within a Wetland? <u>Yes</u>
--	--

Remarks: (Explain alternative procedures here or in a separate report.)
 Data point for Wetland 4

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes <u>X</u> No <u> </u> Depth (inches): <u>3-10</u> (includes capillary fringe)	Wetland hydrology present? <u>Yes</u>
--	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP10

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		50	Yes	FAC
2	<i>Quercus palustris</i>		30	Yes	FACW
3	<i>Liquidambar styraciflua</i>		20	Yes	FAC
4					
5					
6					
7					
8					
9					
10					
			100 =	Total Cover	

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		15	Yes	FAC
2	<i>Liquidambar styraciflua</i>		15	Yes	FAC
3					
4					
5					
6					
7					
8					
9					
10					
			30 =	Total Cover	

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Cinna arundinacea</i>		30	Yes	FACW
2	<i>Lonicera japonica</i>		7	No	FACU
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			37 =	Total Cover	

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		5	Yes	FACU
2					
3					
4					
5					
			5 =	Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across all Strata: 7 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 85.71% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

 1 - Rapid test for hydrophytic vegetation

X 2 - Dominance test is >50%

 3 - Prevalence index is ≤3.0*

 4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

 Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	2.5Y 5/2	90	7.5YR 4/6	10	C	M	silty clay	
3-10	2.5Y 5/2	90	7.5YR 4/6	5	C	M	silty clay	
			2.5Y 6/6	5	C	M		
10-14	2.5Y 6/2	70	7.5YR 6/8	30	C	M	clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils:

- | | | |
|--|---|---|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> (MLRA 147, 148) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| <input type="checkbox"/> Stratified Layers (A5) | <input checked="" type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> (MLRA 136, 147) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR,N | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N | |
| <input type="checkbox"/> MLRA 147, 148) | <input type="checkbox"/> MLRA 136) | |
| <input type="checkbox"/> Sandy Gley Matrix (S4) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) | |

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: clay
 Depth (inches): 10

Hydric soil present? Yes

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/6/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP11
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.185498 Long.: -85.863937 Datum: _____
 Soil Map Unit Name: OtA - Otwood silt loam, 0 to 2 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>No</u> Wetland hydrology present? <u>Yes</u>	Is the Sampled Area within a Wetland? <u>No</u>
---	---

Remarks: (Explain alternative procedures here or in a separate report.)
 Upland data point to Wetland 4.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes <u>X</u> No <u> </u> Depth (inches): <u>12-14</u> (includes capillary fringe)	Wetland hydrology present? <u>Yes</u>
---	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP11

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		60	Yes	FAC
2	<i>Liquidambar styraciflua</i>		20	Yes	FAC
3	<i>Celtis occidentalis</i>		15	No	FACU
4					
5					
6					
7					
8					
9					
10					
			95 =	Total Cover	

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Liquidambar styraciflua</i>		30	Yes	FAC
2	<i>Rosa multiflora</i>		20	Yes	FACU
3	<i>Fagus grandifolia</i>		10	No	FACU
4					
5					
6					
7					
8					
9					
10					
			60 =	Total Cover	

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		15	Yes	FACU
2	<i>Microstegium vimineum</i>		12	Yes	FAC
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			27 =	Total Cover	

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		12	Yes	FACU
2					
3					
4					
5					
			12 =	Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across all Strata: 7 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 57.14% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

 1 - Rapid test for hydrophytic vegetation

X 2 - Dominance test is >50%

 3 - Prevalence index is ≤3.0*

 4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

 Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/6/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP12
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.186917 Long.: -85.862056 Datum: _____
 Soil Map Unit Name: ScA - Sciotoville silt loam, 0 to 2 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>Yes</u> Wetland hydrology present? <u>Yes</u>	Is the Sampled Area within a Wetland? <u>Yes</u>
--	--

Remarks: (Explain alternative procedures here or in a separate report.)
 Data point to Wetland 4.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes <u>X</u> No _____ Depth (inches): <u>1-3</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>Yes</u>
---	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP12

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		75	Yes	FAC
2	<i>Fraxinus pennsylvanica</i>		20	Yes	FACW
3					
4					
5					
6					
7					
8					
9					
10					
			95	=	Total Cover

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		10	Yes	FAC
2					
3					
4					
5					
6					
7					
8					
9					
10					
			10	=	Total Cover

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Carex tribuloides</i>		5	Yes	FACW
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			5	=	Total Cover

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1					
2					
3					
4					
5					
			0	=	Total Cover

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across all Strata: 4 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

 1 - Rapid test for hydrophytic vegetation

 X 2 - Dominance test is >50%

 3 - Prevalence index is ≤3.0*

 4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

 Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-14	2.5Y 4/1	75	5YR 4/6	20	C	M	silty clay loam	
			2.5Y 5/2	5	D	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils:

- | | | |
|--|---|---|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> (MLRA 147, 148) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| <input type="checkbox"/> Stratified Layers (A5) | <input checked="" type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> (MLRA 136, 147) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR,N | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N | |
| <input type="checkbox"/> MLRA 147, 148) | <input type="checkbox"/> MLRA 136) | |
| <input type="checkbox"/> Sandy Gley Matrix (S4) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) | |

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric soil present? Yes

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/6/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP13
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.186619 Long.: -85.861932 Datum: _____
 Soil Map Unit Name: ScA - Sciotoville silt loam, 0 to 2 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>No</u> Wetland hydrology present? <u>No</u>	Is the Sampled Area within a Wetland? <u>No</u>
--	---

Remarks: (Explain alternative procedures here or in a separate report.)
 Upland data point to Wetland 4.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>No</u>
---	--

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP13

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		55	Yes	FAC
2	<i>Liquidambar styraciflua</i>		25	Yes	FAC
3	<i>Liriodendron tulipifera</i>		15	No	FACU
4					
5					
6					
7					
8					
9					
10					
			95	=	Total Cover

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		15	Yes	FAC
2					
3					
4					
5					
6					
7					
8					
9					
10					
			15	=	Total Cover

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		5	Yes	FACU
2	<i>Allium vineale</i>		3	Yes	FACU
3	<i>Viola sororia</i>		2	Yes	FAC
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			10	=	Total Cover

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		10	Yes	FACU
2					
3					
4					
5					
			10	=	Total Cover

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across all Strata: 7 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 57.14% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

1 - Rapid test for hydrophytic vegetation

2 - Dominance test is >50%

3 - Prevalence index is ≤3.0*

4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 3/4	100					silt loam	
8-14	10YR 5/6	90	10YR 4/3	10	D	M	silty clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils:	
<input type="checkbox"/> Histisol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) (LRR N) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR,N MLRA 147, 148) <input type="checkbox"/> Sandy Gley Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S9) (MLRA 147, 148) <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N MLRA 136) <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)	<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)	<p>*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic</p>

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric soil present? <u> No </u>
---	--

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/6/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP14
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.187297 Long.: -85.864806 Datum: _____
 Soil Map Unit Name: WeA - Weinbach silt loam, 0 to 2 percent slopes (Hydric-by-Inclusion) NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>Yes</u> Wetland hydrology present? <u>Yes</u>	Is the Sampled Area within a Wetland? <u>Yes</u>
--	--

Remarks: (Explain alternative procedures here or in a separate report.)
 Data point to Wetland 5.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes <u>X</u> No _____ Depth (inches): <u>1</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes <u>X</u> No _____ Depth (inches): <u>10-14</u> (includes capillary fringe)	Wetland hydrology present? <u>Yes</u>
---	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Saturation observed between 10 and 14 inches was not associated with a water table, bedrock, or other restrictive layer. Therefore, the criteria of the saturation (A3) indicator was not met.

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP14

Tree Stratum	Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
		0 =	Total Cover	

Sapling/Shrub Stratum	Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
		0 =	Total Cover	

Herb Stratum	Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Microstegium vimineum</i>	95	Yes	FAC
2	<i>Verbesina alternifolia</i>	5	No	FAC
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		100 =	Total Cover	

Woody Vine Stratum	Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
		0 =	Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 1 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

1 - Rapid test for hydrophytic vegetation

2 - Dominance test is >50%

3 - Prevalence index is ≤3.0*

4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

 Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/6/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP15
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.187133 Long.: -85.864983 Datum: _____
 Soil Map Unit Name: WeA - Weinbach silt loam, 0 to 2 percent slopes (Hydric-by-Inclusion) NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>No</u> Wetland hydrology present? <u>No</u>	Is the Sampled Area within a Wetland? <u>No</u>
--	---

Remarks: (Explain alternative procedures here or in a separate report.)
 Upland data point to Wetlands 5 and 6.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>No</u>
---	--

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP15

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Fraxinus pennsylvanica</i>		30	Yes	FACW
2	<i>Acer rubrum</i>		30	Yes	FAC
3	<i>Liquidambar styraciflua</i>		30	Yes	FAC
4	<i>Prunus serotina</i>		5	No	FACU
5	<i>Ulmus alata</i>		5	No	FACU
6					
7					
8					
9					
10					
			100 =	Total Cover	

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lindera benzoin</i>		10	Yes	FAC
2					
3					
4					
5					
6					
7					
8					
9					
10					
			10 =	Total Cover	

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		25	Yes	FACU
2	<i>Glechoma hederacea</i>		15	Yes	FACU
3	<i>Ageratina altissima</i>		5	No	FACU
4	<i>Microstegium vimineum</i>		5	No	FAC
5	<i>Allium vineale</i>		5	No	FACU
6	<i>Rubus allegheniensis</i>		2	No	FACU
7					
8					
9					
10					
11					
12					
13					
14					
15					
			57 =	Total Cover	

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		10	Yes	FACU
2					
3					
4					
5					
			10 =	Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across all Strata: 7 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 57.14% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

1 - Rapid test for hydrophytic vegetation

X 2 - Dominance test is >50%

3 - Prevalence index is ≤3.0*

4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

_____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 3/3	100					silt loam	
4-14	10YR 4/3	95	10YR 3/4	5	C	M	silt loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils:

- | | | |
|--|---|---|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> (MLRA 147, 148) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> (MLRA 136, 147) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR,N | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N | |
| <input type="checkbox"/> MLRA 147, 148) | <input type="checkbox"/> MLRA 136) | |
| <input type="checkbox"/> Sandy Gley Matrix (S4) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) | |

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric soil present? No

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/6/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP16
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.187083 Long.: -85.865306 Datum: _____
 Soil Map Unit Name: WeA - Weinbach silt loam, 0 to 2 percent slopes (Hydric-by-Inclusion) NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>Yes</u> Wetland hydrology present? <u>Yes</u>	Is the Sampled Area within a Wetland? <u>Yes</u>
--	--

Remarks: (Explain alternative procedures here or in a separate report.)
 Data point to Wetland 6.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes <u>X</u> No _____ Depth (inches): <u>1-2</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>Yes</u>
---	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP16

Tree Stratum	Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
		0 =	Total Cover	

Sapling/Shrub Stratum	Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
		0 =	Total Cover	

Herb Stratum	Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Cinna arundinacea</i>	10	Yes	FACW
2	<i>Mentha spicata</i>	10	Yes	FACW
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		20 =	Total Cover	

Woody Vine Stratum	Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
		0 =	Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

1 - Rapid test for hydrophytic vegetation

2 - Dominance test is >50%

3 - Prevalence index is ≤3.0*

4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	2.5Y 5/1	82	10YR 3/6	10	C	M	silty clay	
			5YR 4/6	5	C	M		
			5YR 5/8	3	C	M		
10-14	2.5Y 5/1	80	5YR 4/6	20	C	M	clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils:

- | | | |
|--|---|---|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> (MLRA 147, 148) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| <input type="checkbox"/> Stratified Layers (A5) | <input checked="" type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> (MLRA 136, 147) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR,N | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N | |
| <input type="checkbox"/> MLRA 147, 148) | <input type="checkbox"/> MLRA 136) | |
| <input type="checkbox"/> Sandy Gley Matrix (S4) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) | |

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric soil present? Yes

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/6/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP17
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.186294 Long.: -85.866238 Datum: _____
 Soil Map Unit Name: WeA - Weinbach silt loam, 0 to 2 percent slopes (Hydric-by-Inclusion) NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>Yes</u> Wetland hydrology present? <u>Yes</u>	Is the Sampled Area within a Wetland? <u>Yes</u>
--	--

Remarks: (Explain alternative procedures here or in a separate report.)
 Data point to Wetland 7.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes <u>X</u> No _____ Depth (inches): <u><1</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes <u>X</u> No _____ Depth (inches): <u>0-3</u> (includes capillary fringe)	Wetland hydrology present? <u>Yes</u>
---	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP17

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Quercus palustris</i>		40	Yes	FACW
2	<i>Carpinus caroliniana</i>		20	Yes	FAC
3					
4					
5					
6					
7					
8					
9					
10					
			60	=	Total Cover

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
			0	=	Total Cover

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Microstegium vimineum</i>		10	Yes	FAC
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			10	=	Total Cover

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1					
2					
3					
4					
5					
			0	=	Total Cover

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across all Strata: 3 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

1 - Rapid test for hydrophytic vegetation

2 - Dominance test is >50%

3 - Prevalence index is ≤3.0*

4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/6/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP18
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.18623 Long.: -85.866759 Datum: _____
 Soil Map Unit Name: WeA - Weinbach silt loam, 0 to 2 percent slopes (Hydric-by-Inclusion) NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>No</u> Wetland hydrology present? <u>No</u>	Is the Sampled Area within a Wetland? <u>No</u>
--	---

Remarks: (Explain alternative procedures here or in a separate report.)
 Upland data point to Wetland 7.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>No</u>
---	--

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP18

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Ulmus rubra</i>		20	Yes	FAC
2	<i>Liquidambar styraciflua</i>		20	Yes	FAC
3	<i>Quercus palustris</i>		20	Yes	FACW
4	<i>Prunus serotina</i>		10	No	FACU
5	<i>Fraxinus pennsylvanica</i>		10	No	FACW
6					
7					
8					
9					
10					
			80	=	Total Cover

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Rosa multiflora</i>		20	Yes	FACU
2					
3					
4					
5					
6					
7					
8					
9					
10					
			20	=	Total Cover

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Microstegium vimineum</i>		80	Yes	FAC
2	<i>Glechoma hederacea</i>		15	No	FACU
3	<i>Lonicera japonica</i>		10	No	FACU
4	<i>Rubus allegheniensis</i>		3	No	FACU
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			108	=	Total Cover

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1					
2					
3					
4					
5					
			0	=	Total Cover

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across all Strata: 5 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 80.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

1 - Rapid test for hydrophytic vegetation

2 - Dominance test is >50%

3 - Prevalence index is ≤3.0*

4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

SOIL

Sampling Point: DP18

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 3/3	95	10YR 5/6	5	C	M	silt loam	
2-4	10YR 5/4	87	10YR 5/8	3	C	M	silty clay	
4-14	2.5Y 6/3	88	2.5Y 5/6	10	C	M	silty clay	
			5YR 4/6	2	C	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils:

- Histisol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Muck Mineral (S1) **(LRR,N MLRA 147, 148)**
- Sandy Gley Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S9) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) **(LRR N MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**
- Red Parent Material (F21) **(MLRA 127, 147)**

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 147, 148)**
- Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric soil present? No

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/6/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP19
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.185202 Long.: -85.865231 Datum: _____
 Soil Map Unit Name: OtA - Otwood silt loam, 0 to 2 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>Yes</u> Wetland hydrology present? <u>Yes</u>	Is the Sampled Area within a Wetland? <u>Yes</u>
--	--

Remarks: (Explain alternative procedures here or in a separate report.)
 Data point to Wetland 8.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes <u>X</u> No _____ Depth (inches): <u>0-1</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes <u>X</u> No _____ Depth (inches): <u>0-5</u> (includes capillary fringe)	Wetland hydrology present? <u>Yes</u>
---	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP19

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer negundo</i>		30	Yes	FAC
2	<i>Ulmus americana</i>		30	Yes	FACW
3					
4					
5					
6					
7					
8					
9					
10					
			60	=	Total Cover

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer negundo</i>		15	Yes	FAC
2	<i>Lindera benzoin</i>		5	Yes	FAC
3					
4					
5					
6					
7					
8					
9					
10					
			20	=	Total Cover

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Microstegium vimineum</i>		55	Yes	FAC
2	<i>Lonicera japonica</i>		5	No	FACU
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			60	=	Total Cover

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1					
2					
3					
4					
5					
			0	=	Total Cover

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across all Strata: 5 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

1 - Rapid test for hydrophytic vegetation

2 - Dominance test is >50%

3 - Prevalence index is ≤3.0*

4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 4/2	95	5YR 5/6	5	C	M	silt loam	
5-14	2.5Y 5/1	65	10YR 4/6	30	C	M	clay	
			10YR 3/2	5	D	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils:

- | | | |
|--|---|---|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> (MLRA 147, 148) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| <input type="checkbox"/> Stratified Layers (A5) | <input checked="" type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> (MLRA 136, 147) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR,N | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N | |
| <input type="checkbox"/> MLRA 147, 148) | <input type="checkbox"/> MLRA 136) | |
| <input type="checkbox"/> Sandy Gley Matrix (S4) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) | |

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: clay
 Depth (inches): 5

Hydric soil present? Yes

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/6/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP20
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.18508 Long.: -85.865333 Datum: _____
 Soil Map Unit Name: OtA - Otwood silt loam, 0 to 2 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>No</u> Hydric soil present? <u>No</u> Wetland hydrology present? <u>No</u>	Is the Sampled Area within a Wetland? <u>No</u>
---	---

Remarks: (Explain alternative procedures here or in a separate report.)
 Upland data point to Wetland 8.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>No</u>
---	--

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP20

<u>Tree Stratum</u>		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		45	Yes	FAC
2	<i>Prunus serotina</i>		45	Yes	FACU
3					
4					
5					
6					
7					
8					
9					
10					
			90 =	Total Cover	

<u>Sapling/Shrub Stratum</u>		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Rosa multiflora</i>		60	Yes	FACU
2					
3					
4					
5					
6					
7					
8					
9					
10					
			60 =	Total Cover	

<u>Herb Stratum</u>		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		15	Yes	FACU
2	<i>Rubus allegheniensis</i>		3	No	FACU
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			18 =	Total Cover	

<u>Woody Vine Stratum</u>		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		20	Yes	FACU
2	<i>Toxicodendron radicans</i>		3	No	FAC
3					
4					
5					
			23 =	Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 5 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 20.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

____ 1 - Rapid test for hydrophytic vegetation

____ 2 - Dominance test is >50%

____ 3 - Prevalence index is ≤3.0*

____ 4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? No

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

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 3/3	100					silt loam	
3-14	10YR 5/3	95	10YR 3/3	5	C	M	silty clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils:
<input type="checkbox"/> Histisol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) (LRR N) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR,N MLRA 147, 148) <input type="checkbox"/> Sandy Gley Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S9) (MLRA 147, 148) <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N MLRA 136) <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)
	<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
	<p>*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic</p>

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric soil present? No

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/6/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP21
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.184731 Long.: -85.864794 Datum: _____
 Soil Map Unit Name: ScA - Sciotoville silt loam, 0 to 2 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>Yes</u> Wetland hydrology present? <u>Yes</u>	Is the Sampled Area within a Wetland? <u>Yes</u>
--	--

Remarks: (Explain alternative procedures here or in a separate report.)
 Data point to Wetland 9.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes <u>X</u> No <u> </u> Depth (inches): <u>4</u> Saturation present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>Yes</u>
---	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP21

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		70	Yes	FAC
2	<i>Liquidambar styraciflua</i>		15	No	FAC
3	<i>Platanus occidentalis</i>		15	No	FACW
4					
5					
6					
7					
8					
9					
10					
			100 =	Total Cover	

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		5	Yes	FAC
2					
3					
4					
5					
6					
7					
8					
9					
10					
			5 =	Total Cover	

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Cinna arundinacea</i>		10	Yes	FACW
2	<i>Microstegium vimineum</i>		10	Yes	FAC
3	<i>Rubus allegheniensis</i>		3	No	FACU
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			23 =	Total Cover	

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1					
2					
3					
4					
5					
			0 =	Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across all Strata: 4 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

1 - Rapid test for hydrophytic vegetation

2 - Dominance test is >50%

3 - Prevalence index is ≤3.0*

4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/6/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP22
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.184288 Long.: -85.864879 Datum: _____
 Soil Map Unit Name: ScA - Sciotoville silt loam, 0 to 2 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>No</u> Hydric soil present? <u>No</u> Wetland hydrology present? <u>Yes</u>	Is the Sampled Area within a Wetland? <u>No</u>
--	---

Remarks: (Explain alternative procedures here or in a separate report.)
 Upland data point to Wetland 9.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes <u>X</u> No <u> </u> Depth (inches): <u>12-14</u> (includes capillary fringe)	Wetland hydrology present? <u>Yes</u>
---	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP22

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		85	Yes	FAC
2	<i>Fraxinus pennsylvanica</i>		10	No	FACW
3					
4					
5					
6					
7					
8					
9					
10					
			95 =	Total Cover	

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		20	Yes	FAC
2	<i>Lonicera maackii</i>		15	Yes	UPL
3	<i>Rosa multiflora</i>		8	No	FACU
4					
5					
6					
7					
8					
9					
10					
			43 =	Total Cover	

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Microstegium vimineum</i>		70	Yes	FAC
2	<i>Lonicera japonica</i>		20	Yes	FACU
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			90 =	Total Cover	

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		20	Yes	FACU
2					
3					
4					
5					
			20 =	Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across all Strata: 6 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 50.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

____ 1 - Rapid test for hydrophytic vegetation

____ 2 - Dominance test is >50%

____ 3 - Prevalence index is ≤3.0*

____ 4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? No

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

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/6/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP23
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.185196 Long.: -85.863919 Datum: _____
 Soil Map Unit Name: ScA - Sciotoville silt loam, 0 to 2 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>No</u> Hydric soil present? <u>No</u> Wetland hydrology present? <u>No</u>	Is the Sampled Area within a Wetland? <u>No</u>
---	---

Remarks: (Explain alternative procedures here or in a separate report.)
 Upland data point for Wetlands 8 and 10.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>No</u>
---	--

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP23

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Liquidambar styraciflua</i>		70	Yes	FAC
2	<i>Prunus serotina</i>		20	Yes	FACU
3	<i>Celtis occidentalis</i>		10	No	FACU
4					
5					
6					
7					
8					
9					
10					
			100 =	Total Cover	

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera maackii</i>		25	Yes	UPL
2	<i>Ligustrum vulgare</i>		5	No	FACU
3					
4					
5					
6					
7					
8					
9					
10					
			30 =	Total Cover	

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Allium vineale</i>		3	Yes	FACU
2	<i>Cinna arundinacea</i>		3	Yes	FACW
3	<i>Lonicera japonica</i>		3	Yes	FACU
4	<i>Rosa multiflora</i>		3	Yes	FACU
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			12 =	Total Cover	

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		20	Yes	FACU
2					
3					
4					
5					
			20 =	Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across all Strata: 8 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 25.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

____ 1 - Rapid test for hydrophytic vegetation

____ 2 - Dominance test is >50%

____ 3 - Prevalence index is ≤3.0*

____ 4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? No

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

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 4/3	100					silt loam	
5-14	10YR 4/3	90	10YR 5/6	5	C	M	silty clay loam	
			5YR 5/8	5	C	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils:

- | | | |
|--|---|---|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> (MLRA 147, 148) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> (MLRA 136, 147) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR,N | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N | |
| <input type="checkbox"/> MLRA 147, 148) | <input type="checkbox"/> MLRA 136) | |
| <input type="checkbox"/> Sandy Gley Matrix (S4) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) | |

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric soil present? No

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/6/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP24
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.185354 Long.: -85.862337 Datum: _____
 Soil Map Unit Name: ScA - Sciotoville silt loam, 0 to 2 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>Yes</u> Wetland hydrology present? <u>Yes</u>	Is the Sampled Area within a Wetland? <u>Yes</u>
--	--

Remarks: (Explain alternative procedures here or in a separate report.)
 Data point for Wetland 10.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)	

Field Observations: Surface water present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes <u>X</u> No <u> </u> Depth (inches): <u>6</u> Saturation present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0-6</u> (includes capillary fringe)	Wetland hydrology present? <u>Yes</u>
---	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP24

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		85	Yes	FAC
2	<i>Acer negundo</i>		15	No	FAC
3					
4					
5					
6					
7					
8					
9					
10					
			100	=	Total Cover

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		10	Yes	FAC
2					
3					
4					
5					
6					
7					
8					
9					
10					
			10	=	Total Cover

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Euonymus fortunei</i>		2	No	UPL
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			2	=	Total Cover

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1					
2					
3					
4					
5					
			0	=	Total Cover

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

 1 - Rapid test for hydrophytic vegetation

 X 2 - Dominance test is >50%

 3 - Prevalence index is ≤3.0*

 4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

 Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 3/2	85	5YR 4/6	15	C	M	silty clay loam	
6-14	2.5Y 5/2	85	5YR 5/8	10	C	M	clay	
			10YR 6/6	5	C	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils:	
<input type="checkbox"/> Histisol (A1)	<input type="checkbox"/> Dark Surface (S7)	<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Polyvalue Below Surface (S9) (MLRA 147, 148)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)	<input type="checkbox"/> (MLRA 147, 148)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19)
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> (MLRA 136, 147)
<input type="checkbox"/> 2 cm Muck (A10) (LRR N)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Muck Mineral (S1) (LRR,N MLRA 147, 148)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N MLRA 136)	
<input type="checkbox"/> Sandy Gley Matrix (S4)	<input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)	
		*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Type: <u> </u> clay Depth (inches): <u> </u> 6	Hydric soil present? <u> </u> Yes
--	--

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/7/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP25
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.184523 Long.: -85.866427 Datum: _____
 Soil Map Unit Name: OtA - Otwood silt loam, 0 to 2 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u> No </u> Hydric soil present? <u> No </u> Wetland hydrology present? <u> No </u>	Is the Sampled Area within a Wetland? <u> No </u>
---	---

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators		
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:				Wetland hydrology present? <u> No </u>
Surface water present?	Yes <u> </u>	No <u> X </u>	Depth (inches): <u> N/A </u>	
Water table present?	Yes <u> </u>	No <u> X </u>	Depth (inches): <u> N/A </u>	
Saturation present? (includes capillary fringe)	Yes <u> </u>	No <u> X </u>	Depth (inches): <u> N/A </u>	

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP25

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Prunus serotina</i>		40	Yes	FACU
2	<i>Liquidambar styraciflua</i>		30	Yes	FAC
3	<i>Acer rubrum</i>		20	Yes	FAC
4	<i>Quercus rubra</i>		10	No	FACU
5					
6					
7					
8					
9					
10					
			100	=	Total Cover

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Rosa multiflora</i>		50	Yes	FACU
2	<i>Ilex opaca</i>		10	No	FACU
3					
4					
5					
6					
7					
8					
9					
10					
			60	=	Total Cover

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		30	Yes	FACU
2	<i>Carex blanda</i>		8	No	FAC
3	<i>Rosa multiflora</i>		8	No	FACU
4	<i>Cinna arundinacea</i>		5	No	FACW
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			51	=	Total Cover

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		5	Yes	FACU
2					
3					
4					
5					
			5	=	Total Cover

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across all Strata: 6 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 33.33% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

____ 1 - Rapid test for hydrophytic vegetation

____ 2 - Dominance test is >50%

____ 3 - Prevalence index is ≤3.0*

____ 4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? No

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

SOIL

Sampling Point: DP25

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-14	10YR 5/2	80	10YR 5/3	20	C	M	silty clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils:

- Histisol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) (LRR N)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Muck Mineral (S1) (LRR,N MLRA 147, 148)
- Sandy Gley Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S9) (MLRA 147, 148)
- Thin Dark Surface (S9) (MLRA 147, 148)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) (LRR N MLRA 136)
- Umbric Surface (F13) (MLRA 136, 122)
- Piedmont Floodplain Soils (F19) (MLRA 148)
- Red Parent Material (F21) (MLRA 127, 147)

- 2 cm Muck (A10) (MLRA 147)
- Coast Prairie Redox (A16) (MLRA 147, 148)
- Piedmont Floodplain Soils (F19) (MLRA 136, 147)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric soil present? No

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/7/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP26
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.182522 Long.: -85.866383 Datum: _____
 Soil Map Unit Name: ScA - Sciotoville silt loam, 0 to 2 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>Yes</u> Wetland hydrology present? <u>Yes</u>	Is the Sampled Area within a Wetland? <u>Yes</u>
Remarks: (Explain alternative procedures here or in a separate report.) Data point for Wetland 11.	

HYDROLOGY

Wetland Hydrology Indicators			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)	
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)	
		<input type="checkbox"/> FAC-Neutral Test (D5)	

Field Observations: Surface water present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes <u>X</u> No <u> </u> Depth (inches): <u>6</u> Saturation present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>Yes</u>
---	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP26

Tree Stratum	Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>	95	Yes	FAC
2				
3				
4				
5				
6				
7				
8				
9				
10				
		95 =	Total Cover	

Sapling/Shrub Stratum	Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
		0 =	Total Cover	

Herb Stratum	Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Cinna arundinacea</i>	5	Yes	FACW
2	<i>Lonicera japonica</i>	3	Yes	FACU
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		8 =	Total Cover	

Woody Vine Stratum	Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
		0 =	Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across all Strata: 3 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 66.67% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

1 - Rapid test for hydrophytic vegetation

2 - Dominance test is >50%

3 - Prevalence index is ≤3.0*

4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 4/2	97	5YR 5/6	3	C	M	silt loam	
3-14	2.5Y 5/2	80	5YR 5/6	20	C	M	silty clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils:	
<input type="checkbox"/> Histisol (A1)	<input type="checkbox"/> Dark Surface (S7)	<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Polyvalue Below Surface (S9) (MLRA 147, 148)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)	<input type="checkbox"/> (MLRA 147, 148)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19)
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> (MLRA 136, 147)
<input type="checkbox"/> 2 cm Muck (A10) (LRR N)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Muck Mineral (S1) (LRR,N	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N	
<input type="checkbox"/> MLRA 147, 148)	<input type="checkbox"/> MLRA 136)	
<input type="checkbox"/> Sandy Gley Matrix (S4)	<input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)	
		*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric soil present? <input type="checkbox"/> Yes <input type="checkbox"/> No
---	---

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/7/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP27
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.182423 Long.: -85.866304 Datum: _____
 Soil Map Unit Name: ScA - Sciotoville silt loam, 0 to 2 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>Yes</u> Wetland hydrology present? <u>No</u>	Is the Sampled Area within a Wetland? <u>No</u>
---	---

Remarks: (Explain alternative procedures here or in a separate report.)
 Upland data point to Wetland 11.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>No</u>
---	--

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP27

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		90	Yes	FAC
2	<i>Quercus palustris</i>		10	No	FACW
3					
4					
5					
6					
7					
8					
9					
10					
			100 =	Total Cover	

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		15	Yes	FAC
2	<i>Rosa multiflora</i>		5	Yes	FACU
3					
4					
5					
6					
7					
8					
9					
10					
			20 =	Total Cover	

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Microstegium vimineum</i>		6	Yes	FAC
2	<i>Lonicera japonica</i>		3	Yes	FACU
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			9 =	Total Cover	

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1					
2					
3					
4					
5					
			0 =	Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across all Strata: 5 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 60.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

1 - Rapid test for hydrophytic vegetation

2 - Dominance test is >50%

3 - Prevalence index is ≤3.0*

4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 4/2	97	5YR 5/6	3	C	M	silt loam	
3-14	2.5Y 5/2	80	5YR 5/6	20	C	M	silty clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils:

- | | | |
|--|---|---|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> (MLRA 147, 148) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| <input type="checkbox"/> Stratified Layers (A5) | <input checked="" type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> (MLRA 136, 147) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR,N | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N | |
| <input type="checkbox"/> MLRA 147, 148) | <input type="checkbox"/> MLRA 136) | |
| <input type="checkbox"/> Sandy Gley Matrix (S4) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) | |

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric soil present? Yes

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/7/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP28
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.183144 Long.: -85.864136 Datum: _____
 Soil Map Unit Name: ScA - Sciotoville silt loam, 0 to 2 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>No</u> Hydric soil present? <u>No</u> Wetland hydrology present? <u>Yes</u>	Is the Sampled Area within a Wetland? <u>No</u>
--	---

Remarks: (Explain alternative procedures here or in a separate report.)
 Upland data point along railroad ditch.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes <u> </u> No <u> </u> Depth (inches): <u>X</u> Water table present? Yes <u>X</u> No <u> </u> Depth (inches): <u>2</u> Saturation present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0-2</u> (includes capillary fringe)	Wetland hydrology present? <u>Yes</u>
--	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP28

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		70	Yes	FAC
2	<i>Acer negundo</i>		20	Yes	FAC
3	<i>Quercus palustris</i>		10	No	FACW
4					
5					
6					
7					
8					
9					
10					
			100 =	Total Cover	

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera maackii</i>		80	Yes	UPL
2					
3					
4					
5					
6					
7					
8					
9					
10					
			80 =	Total Cover	

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Glechoma hederacea</i>		15	Yes	FACU
2	<i>Allium vineale</i>		5	No	FACU
3	<i>Carex blanda</i>		5	No	FAC
4	<i>Elymus virginicus</i>		2	No	FACW
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			27 =	Total Cover	

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1					
2					
3					
4					
5					
			0 =	Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across all Strata: 4 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 50.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

____ 1 - Rapid test for hydrophytic vegetation

____ 2 - Dominance test is >50%

____ 3 - Prevalence index is ≤3.0*

____ 4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? No

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

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-14	10YR 3/2	97	5YR 5/6	3	C	M	silty clay loam	rocky fill present in this layer.

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils:

- Histisol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) (LRR N)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Muck Mineral (S1) (LRR,N MLRA 147, 148)
- Sandy Gley Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S9) (MLRA 147, 148)
- Thin Dark Surface (S9) (MLRA 147, 148)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) (LRR N MLRA 136)
- Umbric Surface (F13) (MLRA 136, 122)
- Piedmont Floodplain Soils (F19) (MLRA 148)
- Red Parent Material (F21) (MLRA 127, 147)

- 2 cm Muck (A10) (MLRA 147)
- Coast Prairie Redox (A16) (MLRA 147, 148)
- Piedmont Floodplain Soils (F19) (MLRA 136, 147)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric soil present? No

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/7/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP29
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.183589 Long.: -85.86493 Datum: _____
 Soil Map Unit Name: ScA - Sciotoville silt loam, 0 to 2 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>Yes</u> Wetland hydrology present? <u>Yes</u>	Is the Sampled Area within a Wetland? <u>Yes</u>
--	--

Remarks: (Explain alternative procedures here or in a separate report.)
 Data Point to Wetland 12.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes <u>X</u> No <u> </u> Depth (inches): <u>3</u> Saturation present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0-3</u> (includes capillary fringe)	Wetland hydrology present? <u>Yes</u>
---	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP29

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		70	Yes	FAC
2	<i>Liquidambar styraciflua</i>		15	No	FAC
3	<i>Fraxinus pennsylvanica</i>		10	No	FACW
4					
5					
6					
7					
8					
9					
10					
			95	=	Total Cover

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer negundo</i>		15	Yes	FAC
2	<i>Fagus grandifolia</i>		10	Yes	FACU
3					
4					
5					
6					
7					
8					
9					
10					
			25	=	Total Cover

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Cinna arundinacea</i>		20	Yes	FACW
2	<i>Carex vulpinoidea</i>		5	No	OBL
3	<i>Rubus allegheniensis</i>		2	No	FACU
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			27	=	Total Cover

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1					
2					
3					
4					
5					
			0	=	Total Cover

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across all Strata: 4 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 75.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

1 - Rapid test for hydrophytic vegetation

2 - Dominance test is >50%

3 - Prevalence index is ≤3.0*

4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/7/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP30
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.183544 Long.: -85.8645 Datum: _____
 Soil Map Unit Name: ScA - Sciotoville silt loam, 0 to 2 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u> No </u> Hydric soil present? <u> No </u> Wetland hydrology present? <u> No </u>	Is the Sampled Area within a Wetland? <u> No </u>
---	---

Remarks: (Explain alternative procedures here or in a separate report.)
 Upland data point to Wetlands 12 and 13.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Water table present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Saturation present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> (includes capillary fringe)	Wetland hydrology present? <u> No </u>
---	--

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP30

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		80	Yes	FAC
2	<i>Liquidambar styraciflua</i>		10	No	FAC
3					
4					
5					
6					
7					
8					
9					
10					
			90	=	Total Cover

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Rosa multiflora</i>		35	Yes	FACU
2	<i>Liquidambar styraciflua</i>		5	No	FAC
3					
4					
5					
6					
7					
8					
9					
10					
			40	=	Total Cover

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Glechoma hederacea</i>		35	Yes	FACU
2	<i>Lonicera japonica</i>		30	Yes	FACU
3	<i>Allium vineale</i>		15	No	FACU
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			80	=	Total Cover

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		20	Yes	FACU
2					
3					
4					
5					
			20	=	Total Cover

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 5 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 20.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

____ 1 - Rapid test for hydrophytic vegetation

____ 2 - Dominance test is >50%

____ 3 - Prevalence index is ≤3.0*

____ 4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? No

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

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/7/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP31
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.183612 Long.: -85.864463 Datum: _____
 Soil Map Unit Name: ScA - Sciotoville silt loam, 0 to 2 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>Yes</u> Wetland hydrology present? <u>Yes</u>	Is the Sampled Area within a Wetland? <u>Yes</u>
--	--

Remarks: (Explain alternative procedures here or in a separate report.)
 Data point to Wetland 13.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Moss Trim Lines (B16)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Stunted or Stressed Plants (D1)
	<input type="checkbox"/> Geomorphic Position (D2)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes <u>X</u> No _____ Depth (inches): <u>0-1</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes <u>X</u> No _____ Depth (inches): <u>0-3</u> (includes capillary fringe)	Wetland hydrology present? <u>Yes</u>
---	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP31

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		50	Yes	FAC
2					
3					
4					
5					
6					
7					
8					
9					
10					
			50 =	Total Cover	

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
			0 =	Total Cover	

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Glechoma hederacea</i>		10	Yes	FACU
2	<i>Cinna arundinacea</i>		10	Yes	FACW
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			20 =	Total Cover	

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1					
2					
3					
4					
5					
			0 =	Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across all Strata: 3 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 66.67% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

1 - Rapid test for hydrophytic vegetation

2 - Dominance test is >50%

3 - Prevalence index is ≤3.0*

4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/7/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP32
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.184737 Long.: -85.862998 Datum: _____
 Soil Map Unit Name: ScA - Sciotoville silt loam, 0 to 2 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>Yes</u> Wetland hydrology present? <u>Yes</u>	Is the Sampled Area within a Wetland? <u>Yes</u>
--	--

Remarks: (Explain alternative procedures here or in a separate report.)
 Data point to Wetland 14.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes <u>X</u> No <u> </u> Depth (inches): <u>5</u> Saturation present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>Yes</u>
---	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP32

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		95	Yes	FAC
2					
3					
4					
5					
6					
7					
8					
9					
10					
			95 =	Total Cover	

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Liquidambar styraciflua</i>		20	Yes	FAC
2					
3					
4					
5					
6					
7					
8					
9					
10					
			20 =	Total Cover	

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Cinna arundinacea</i>		5	Yes	FACW
2	<i>Lonicera japonica</i>		5	Yes	FACU
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			10 =	Total Cover	

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1					
2					
3					
4					
5					
			0 =	Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across all Strata: 4 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 75.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

 1 - Rapid test for hydrophytic vegetation

 X 2 - Dominance test is >50%

 3 - Prevalence index is ≤3.0*

 4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

 Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/7/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP33
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.184912 Long.: -85.862698 Datum: _____
 Soil Map Unit Name: ScA - Sciotoville silt loam, 0 to 2 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u> </u> No Hydric soil present? <u> </u> No Wetland hydrology present? <u> </u> No	Is the Sampled Area within a Wetland? <u> </u> No
--	--

Remarks: (Explain alternative procedures here or in a separate report.)
 Upland data point to Wetlands 10 and 14.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes <u> </u> No <u> X </u> Depth (inches): <u> </u> N/A Water table present? Yes <u> </u> No <u> X </u> Depth (inches): <u> </u> N/A Saturation present? Yes <u> </u> No <u> X </u> Depth (inches): <u> </u> N/A (includes capillary fringe)	Wetland hydrology present? <u> </u> No
--	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP33

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Juniperus virginiana</i>		30	Yes	FACU
2	<i>Acer rubrum</i>		30	Yes	FAC
3	<i>Acer negundo</i>		20	Yes	FAC
4					
5					
6					
7					
8					
9					
10					
			80	=	Total Cover

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera maackii</i>		15	Yes	UPL
2	<i>Ilex opaca</i>		15	Yes	FACU
3					
4					
5					
6					
7					
8					
9					
10					
			30	=	Total Cover

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Microstegium vimineum</i>		40	Yes	FAC
2	<i>Lonicera japonica</i>		20	Yes	FACU
3	<i>Carex blanda</i>		5	No	FAC
4	<i>Rubus allegheniensis</i>		5	No	FACU
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			70	=	Total Cover

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		20	Yes	FACU
2					
3					
4					
5					
			20	=	Total Cover

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across all Strata: 8 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 37.50% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

____ 1 - Rapid test for hydrophytic vegetation

____ 2 - Dominance test is >50%

____ 3 - Prevalence index is ≤3.0*

____ 4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? No

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

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-14	10YR 4/4	100					silt loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils:	
<input type="checkbox"/> Histisol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) (LRR N) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR,N MLRA 147, 148) <input type="checkbox"/> Sandy Gley Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S9) (MLRA 147, 148) <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N MLRA 136) <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)	<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
		*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric soil present? <u> No </u>
---	--

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/7/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP34
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.186159 Long.: -85.860965 Datum: _____
 Soil Map Unit Name: ScA - Sciotoville silt loam, 0 to 2 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>Yes</u> Wetland hydrology present? <u>Yes</u>	Is the Sampled Area within a Wetland? <u>Yes</u>
--	--

Remarks: (Explain alternative procedures here or in a separate report.)
 Data point to Wetland 15.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes <u>X</u> No _____ Depth (inches): <u>0-1</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes <u>X</u> No _____ Depth (inches): <u>0-6</u> (includes capillary fringe)	Wetland hydrology present? <u>Yes</u>
---	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP34

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		60	Yes	FAC
2	<i>Quercus palustris</i>		40	Yes	FACW
3					
4					
5					
6					
7					
8					
9					
10					
			100	=	Total Cover

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Quercus palustris</i>		5	Yes	FACW
2					
3					
4					
5					
6					
7					
8					
9					
10					
			5	=	Total Cover

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			0	=	Total Cover

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1					
2					
3					
4					
5					
			0	=	Total Cover

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across all Strata: 3 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

1 - Rapid test for hydrophytic vegetation

2 - Dominance test is >50%

3 - Prevalence index is ≤3.0*

4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

Remarks: (Include photo numbers here or on a separate sheet)
 No herbaceous vegetation was observed, potentially due to the use of four-wheelers in the immediate area.

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 4/2	85	5YR 5/6	10	C	M	silty clay loam	
			10YR 5/8	5	C	M		
6-14	2.5Y 5/2	75	5YR 5/6	20	C	M	clay	
			10YR 5/8	5	C	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histisol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR N)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Muck Mineral (S1) (LRR,N MLRA 147, 148)</p> <p><input type="checkbox"/> Sandy Gley Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p>	<p>Indicators for Problematic Hydric Soils:</p> <p><input type="checkbox"/> Dark Surface (S7)</p> <p><input type="checkbox"/> Polyvalue Below Surface (S9) (MLRA 147, 148)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input checked="" type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N MLRA 136)</p> <p><input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148)</p> <p><input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)</p>	<p><input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p> *Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic</p>
---	---	---

<p>Restrictive Layer (if observed):</p> <p>Type: <u>clay</u></p> <p>Depth (inches): <u>6</u></p>	<p>Hydric soil present? <u>Yes</u></p>
---	--

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/7/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP35
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.186291 Long.: -85.861066 Datum: _____
 Soil Map Unit Name: ScA - Sciotoville silt loam, 0 to 2 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>No</u> Hydric soil present? <u>No</u> Wetland hydrology present? <u>No</u>	Is the Sampled Area within a Wetland? <u>No</u>
---	---

Remarks: (Explain alternative procedures here or in a separate report.)
 Upland data point to Wetlands 15 and 16.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>No</u>
---	--

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP35

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Robinia pseudoacacia</i>		30	Yes	FACU
2	<i>Acer rubrum</i>		30	Yes	FAC
3	<i>Quercus rubra</i>		20	No	FACU
4	<i>Diospyros virginiana</i>		15	No	FAC
5	<i>Ulmus rubra</i>		10	No	FAC
6					
7					
8					
9					
10					
			105	=	Total Cover

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Rosa multiflora</i>		20	Yes	FACU
2	<i>Lonicera maackii</i>		20	Yes	UPL
3	<i>Acer rubrum</i>		10	No	FAC
4	<i>Juniperus virginiana</i>		5	No	FACU
5					
6					
7					
8					
9					
10					
			55	=	Total Cover

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Allium vineale</i>		30	Yes	FACU
2	<i>Lonicera japonica</i>		15	Yes	FACU
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			45	=	Total Cover

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		10	Yes	FACU
2					
3					
4					
5					
			10	=	Total Cover

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 7 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 14.29% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

____ 1 - Rapid test for hydrophytic vegetation

____ 2 - Dominance test is >50%

____ 3 - Prevalence index is ≤3.0*

____ 4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? No

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

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/7/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP36
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.186437 Long.: -85.860947 Datum: _____
 Soil Map Unit Name: ScA - Sciotoville silt loam, 0 to 2 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>Yes</u> Wetland hydrology present? <u>Yes</u>	Is the Sampled Area within a Wetland? <u>Yes</u>
Remarks: (Explain alternative procedures here or in a separate report.) Data point to Wetland 16.	

HYDROLOGY

Wetland Hydrology Indicators			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)	
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	

Field Observations: Surface water present? Yes <u>X</u> No _____ Depth (inches): <u>1-5</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>Yes</u>
Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP36

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		20	Yes	FAC
2	<i>Fraxinus pennsylvanica</i>		20	Yes	FACW
3					
4					
5					
6					
7					
8					
9					
10					
			40	=	Total Cover

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		10	Yes	FAC
2	<i>Acer negundo</i>		10	Yes	FAC
3					
4					
5					
6					
7					
8					
9					
10					
			20	=	Total Cover

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			0	=	Total Cover

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1					
2					
3					
4					
5					
			0	=	Total Cover

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across all Strata: 4 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

 1 - Rapid test for hydrophytic vegetation

 X 2 - Dominance test is >50%

 3 - Prevalence index is ≤3.0*

 4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

 Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/7/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP37
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.184329 Long.: -85.870573 Datum: _____
 Soil Map Unit Name: UeC - Urban land-Alfic Udarents complex, fragipan substratum-over loamy sediment NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>Yes</u> Wetland hydrology present? <u>Yes</u>	Is the Sampled Area within a Wetland? <u>Yes</u>
--	--

Remarks: (Explain alternative procedures here or in a separate report.)
 Data point to Wetland 17.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes <u>X</u> No <u> </u> Depth (inches): <u>6</u> Saturation present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>Yes</u>
---	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP37

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Quercus palustris</i>		40	Yes	FACW
2	<i>Acer rubrum</i>		30	Yes	FAC
3					
4					
5					
6					
7					
8					
9					
10					
			70	=	Total Cover

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Ligustrum sinense</i>		15	Yes	FACU
2	<i>Quercus palustris</i>		5	Yes	FACW
3	<i>Rosa multiflora</i>		3	No	FACU
4					
5					
6					
7					
8					
9					
10					
			23	=	Total Cover

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Cinna arundinacea</i>		25	Yes	FACW
2	<i>Microstegium vimineum</i>		20	Yes	FAC
3	<i>Lonicera japonica</i>		8	No	FACU
4	<i>Glechoma hederacea</i>		8	No	FACU
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			61	=	Total Cover

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		15	Yes	FACU
2					
3					
4					
5					
			15	=	Total Cover

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across all Strata: 7 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 71.43% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

1 - Rapid test for hydrophytic vegetation

2 - Dominance test is >50%

3 - Prevalence index is ≤3.0*

4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	2.5Y 6/1	60	5YR 5/8	40	C	M	clay	
6-14	2.5Y 6/1	70	5YR 5/8	20	C	M	clay	
			2.5Y 6/8	5	C	M		
			2.5Y 3/3	5	C	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils:

- | | | |
|---|--|--|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> (MLRA 147, 148) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| <input type="checkbox"/> Stratified Layers (A5) | <input checked="" type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> (MLRA 136, 147) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR,N MLRA 147, 148) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N MLRA 136) | |
| <input type="checkbox"/> Sandy Gley Matrix (S4) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) | |

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric soil present? Yes

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/7/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP38
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.184116 Long.: -85.87069 Datum: _____
 Soil Map Unit Name: ScA - Sciotoville silt loam, 0 to 2 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>No</u> Wetland hydrology present? <u>No</u>	Is the Sampled Area within a Wetland? <u>No</u>
--	---

Remarks: (Explain alternative procedures here or in a separate report.)
 Upland data point to Wetlands 17 and 18.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>No</u>
---	--

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP38

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		30	Yes	FAC
2	<i>Robinia pseudoacacia</i>		20	Yes	FACU
3	<i>Fraxinus pennsylvanica</i>		20	Yes	FACW
4	<i>Liquidambar styraciflua</i>		20	Yes	FAC
5					
6					
7					
8					
9					
10					
			90	=	Total Cover

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer negundo</i>		5	Yes	FAC
2	<i>Rosa multiflora</i>		3	Yes	FACU
3					
4					
5					
6					
7					
8					
9					
10					
			8	=	Total Cover

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Microstegium vimineum</i>		35	Yes	FAC
2	<i>Elymus virginicus</i>		20	Yes	FACW
3	<i>Lonicera japonica</i>		15	No	FACU
4	<i>Cinna arundinacea</i>		10	No	FACW
5	<i>Allium vineale</i>		5	No	FACU
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			85	=	Total Cover

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		15	Yes	FACU
2	<i>Euonymus fortunei</i>		3	No	UPL
3					
4					
5					
			18	=	Total Cover

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across all Strata: 9 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 66.67% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

1 - Rapid test for hydrophytic vegetation

2 - Dominance test is >50%

3 - Prevalence index is ≤3.0*

4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 3/4	100					silt loam	
4-14	10YR 5/3	85	10YR 5/6	15	C	M	silty clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

<p>Hydric Soil Indicators:</p> <p>___ Histisol (A1)</p> <p>___ Histic Epipedon (A2)</p> <p>___ Black Histic (A3)</p> <p>___ Hydrogen Sulfide (A4)</p> <p>___ Stratified Layers (A5)</p> <p>___ 2 cm Muck (A10) (LRR N)</p> <p>___ Depleted Below Dark Surface (A11)</p> <p>___ Thick Dark Surface (A12)</p> <p>___ Sandy Muck Mineral (S1) (LRR,N MLRA 147, 148)</p> <p>___ Sandy Gley Matrix (S4)</p> <p>___ Sandy Redox (S5)</p> <p>___ Stripped Matrix (S6)</p>	<p>Indicators for Problematic Hydric Soils:</p> <p>___ Dark Surface (S7)</p> <p>___ Polyvalue Below Surface (S9) (MLRA 147, 148)</p> <p>___ Thin Dark Surface (S9) (MLRA 147, 148)</p> <p>___ Loamy Gleyed Matrix (F2)</p> <p>___ Depleted Matrix (F3)</p> <p>___ Redox Dark Surface (F6)</p> <p>___ Depleted Dark Surface (F7)</p> <p>___ Redox Depressions (F8)</p> <p>___ Iron-Manganese Masses (F12) (LRR N MLRA 136)</p> <p>___ Umbric Surface (F13) (MLRA 136, 122)</p> <p>___ Piedmont Floodplain Soils (F19) (MLRA 148)</p> <p>___ Red Parent Material (F21) (MLRA 127, 147)</p>	<p>___ 2 cm Muck (A10) (MLRA 147)</p> <p>___ Coast Prairie Redox (A16) (MLRA 147, 148)</p> <p>___ Piedmont Floodplain Soils (F19) (MLRA 136, 147)</p> <p>___ Very Shallow Dark Surface (TF12)</p> <p>___ Other (Explain in Remarks)</p> <p> *Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic</p>
---	--	--

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric soil present? <u> No </u></p>
--	--

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/11/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP39
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.184059 Long.: -85.870908 Datum: _____
 Soil Map Unit Name: ScA - Sciotoville silt loam, 0 to 2 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u> </u> No Hydric soil present? <u> </u> No Wetland hydrology present? <u> </u> No	Is the Sampled Area within a Wetland? <u> </u> No
--	--

Remarks: (Explain alternative procedures here or in a separate report.)
 Upland data point to Wetlands 18 and 19.

HYDROLOGY

Wetland Hydrology Indicators		
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:				
Surface water present?	Yes <u> </u>	No <u> X </u>	Depth (inches): <u> </u> N/A	Wetland hydrology present? <u> </u> No
Water table present?	Yes <u> </u>	No <u> X </u>	Depth (inches): <u> </u> N/A	
Saturation present? (includes capillary fringe)	Yes <u> </u>	No <u> X </u>	Depth (inches): <u> </u> N/A	

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP39

<u>Tree Stratum</u>		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		80	Yes	FAC
2	<i>Quercus palustris</i>		15	No	FACW
3					
4					
5					
6					
7					
8					
9					
10					
			95 =	Total Cover	
<u>Sapling/Shrub Stratum</u>		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Rosa multiflora</i>		60	Yes	FACU
2					
3					
4					
5					
6					
7					
8					
9					
10					
			60 =	Total Cover	
<u>Herb Stratum</u>		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		60	Yes	FACU
2	<i>Rubus allegheniensis</i>		10	No	FACU
3	<i>Rosa multiflora</i>		10	No	FACU
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			80 =	Total Cover	
<u>Woody Vine Stratum</u>		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		30	Yes	FACU
2					
3					
4					
5					
			30 =	Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 4 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 25.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

____ 1 - Rapid test for hydrophytic vegetation

____ 2 - Dominance test is >50%

____ 3 - Prevalence index is ≤3.0*

____ 4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? No

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

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 3/3	100					silt loam	
3-10	10YR 4/4	75	2.5Y 5/2	15	D	M	silty clay	
			10YR 5/8	10	C	M		
10-14	2.5Y 5/3	90	10YR 5/8	5	C	M	silty clay loam	
			10YR 4/3	5	D	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils:

- | | | |
|--|---|---|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> (MLRA 147, 148) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> (MLRA 136, 147) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR,N | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N | |
| <input type="checkbox"/> MLRA 147, 148) | <input type="checkbox"/> MLRA 136) | |
| <input type="checkbox"/> Sandy Gley Matrix (S4) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) | |

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric soil present? No

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/11/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP40
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.184022 Long.: -85.871116 Datum: _____
 Soil Map Unit Name: UeC - Urban land-Alfic Udarents complex, fragipan substratum-over loamy sediment NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>Yes</u> Wetland hydrology present? <u>Yes</u>	Is the Sampled Area within a Wetland? <u>Yes</u>
--	--

Remarks: (Explain alternative procedures here or in a separate report.)
 Data point to Wetland 18.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes <u>X</u> No _____ Depth (inches): <u>1-3</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes <u>X</u> No _____ Depth (inches): <u>0-2</u> (includes capillary fringe)	Wetland hydrology present? <u>Yes</u>
---	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP40

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		60	Yes	FAC
2	<i>Quercus palustris</i>		20	Yes	FACW
3					
4					
5					
6					
7					
8					
9					
10					
			80	=	Total Cover

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		20	Yes	FAC
2					
3					
4					
5					
6					
7					
8					
9					
10					
			20	=	Total Cover

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			0	=	Total Cover

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1					
2					
3					
4					
5					
			0	=	Total Cover

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across all Strata: 3 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

 1 - Rapid test for hydrophytic vegetation

 X 2 - Dominance test is >50%

 3 - Prevalence index is ≤3.0*

 4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

 Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 5/2	100					silty clay	
2-14	2.5Y 5/1	70	7.5YR 4/6	25	C	M	clay	
			5YR 5/6	5	C	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils:

- | | | |
|--|---|---|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> (MLRA 147, 148) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| <input type="checkbox"/> Stratified Layers (A5) | <input checked="" type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> (MLRA 136, 147) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR,N | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N | |
| <input type="checkbox"/> MLRA 147, 148) | <input type="checkbox"/> MLRA 136) | |
| <input type="checkbox"/> Sandy Gley Matrix (S4) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) | |

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: clay
 Depth (inches): 2

Hydric soil present? Yes

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/11/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP41
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.18383 Long.: -85.871049 Datum: _____
 Soil Map Unit Name: ScA - Sciotoville silt loam, 0 to 2 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>Yes</u> Wetland hydrology present? <u>Yes</u>	Is the Sampled Area within a Wetland? <u>Yes</u>
--	--

Remarks: (Explain alternative procedures here or in a separate report.)
 Data point to Wetland 19.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes <u>X</u> No <u> </u> Depth (inches): <u>2</u> Saturation present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0-2</u> (includes capillary fringe)	Wetland hydrology present? <u>Yes</u>
---	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP41

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Quercus palustris</i>		60	Yes	FACW
2	<i>Acer rubrum</i>		20	Yes	FAC
3					
4					
5					
6					
7					
8					
9					
10					
			80	=	Total Cover

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
			0	=	Total Cover

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Elymus virginicus</i>		10	Yes	FACW
2	<i>Cinna arundinacea</i>		5	Yes	FACW
3	<i>Lonicera japonica</i>		5	Yes	FACU
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			20	=	Total Cover

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1					
2					
3					
4					
5					
			0	=	Total Cover

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across all Strata: 5 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 80.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

1 - Rapid test for hydrophytic vegetation

2 - Dominance test is >50%

3 - Prevalence index is ≤3.0*

4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 5/2	97	10YR 5/8	3	C	M	silt loam	
2-10	2.5Y 4/2	70	10YR 5/6	30	C	M	silty clay	
10-14	10YR 5/2	75	10YR 5/6	20	C	M	silty clay	
			5YR 4/6	5	C	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils:

- | | | |
|--|---|---|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> (MLRA 147, 148) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| <input type="checkbox"/> Stratified Layers (A5) | <input checked="" type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> (MLRA 136, 147) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR,N) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N) | |
| <input type="checkbox"/> (MLRA 147, 148) | <input type="checkbox"/> (MLRA 136) | |
| <input type="checkbox"/> Sandy Gley Matrix (S4) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) | |

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric soil present? Yes

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/11/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP42
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.183164 Long.: -85.870825 Datum: _____
 Soil Map Unit Name: OTC - Otwood silt loam, 6 to 12 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>No</u> Wetland hydrology present? <u>No</u>	Is the Sampled Area within a Wetland? <u>No</u>
--	---

Remarks: (Explain alternative procedures here or in a separate report.)
 Upland data point on the terrace near the downstream portion of Intermittent Stream 1.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>No</u>
---	--

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP42

Tree Stratum	Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer negundo</i>	40	Yes	FAC
2	<i>Ulmus rubra</i>	20	Yes	FAC
3				
4				
5				
6				
7				
8				
9				
10				
		60 =	Total Cover	

Sapling/Shrub Stratum	Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera maackii</i>	30	Yes	UPL
2	<i>Acer negundo</i>	20	Yes	FAC
3	<i>Rosa multiflora</i>	10	No	FACU
4				
5				
6				
7				
8				
9				
10				
		60 =	Total Cover	

Herb Stratum	Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Elymus virginicus</i>	20	Yes	FACW
2	<i>Euonymus fortunei</i>	10	Yes	UPL
3	<i>Microstegium vimineum</i>	10	Yes	FAC
4	<i>Glechoma hederacea</i>	10	Yes	FACU
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		50 =	Total Cover	

Woody Vine Stratum	Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Euonymus fortunei</i>	5	Yes	UPL
2				
3				
4				
5				
		5 =	Total Cover	

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

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across all Strata: 9 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 55.56% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

1 - Rapid test for hydrophytic vegetation

2 - Dominance test is >50%

3 - Prevalence index is ≤3.0*

4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 4/4	100					silty clay loam	
3-8	10YR 4/3	90	10YR 4/6	10	C	M	silty clay loam	
8-14	10YR 4/4	92	10YR 4/6	5	C	M	silty clay loam	
			10YR 5/3	3	D	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils:
<input type="checkbox"/> Histisol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) (LRR N) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR,N MLRA 147, 148) <input type="checkbox"/> Sandy Gley Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S9) (MLRA 147, 148) <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N MLRA 136) <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)

- 2 cm Muck (A10) (MLRA 147)
- Coast Prairie Redox (A16) (MLRA 147, 148)
- Piedmont Floodplain Soils (F19) (MLRA 136, 147)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric soil present? <input type="checkbox"/> No
---	--

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/11/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP43
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.181412 Long.: -85.865997 Datum: _____
 Soil Map Unit Name: UeC - Urban land-Alfic Udarents complex, fragipan substratum-over loamy sediment NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>No</u> Hydric soil present? <u>No</u> Wetland hydrology present? <u>No</u>	Is the Sampled Area within a Wetland? <u>No</u>
---	---

Remarks: (Explain alternative procedures here or in a separate report.)
 Upland data point along railroad ditch.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>No</u>
---	--

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP43

<u>Tree Stratum</u>		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		90	Yes	FAC
2					
3					
4					
5					
6					
7					
8					
9					
10					
			90 =	Total Cover	

<u>Sapling/Shrub Stratum</u>		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera maackii</i>		80	Yes	UPL
2					
3					
4					
5					
6					
7					
8					
9					
10					
			80 =	Total Cover	

<u>Herb Stratum</u>		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		10	Yes	FACU
2	<i>Microstegium vimineum</i>		5	Yes	FAC
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			15 =	Total Cover	

<u>Woody Vine Stratum</u>		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		5	Yes	FACU
2					
3					
4					
5					
			5 =	Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across all Strata: 5 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 40.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

____ 1 - Rapid test for hydrophytic vegetation

____ 2 - Dominance test is >50%

____ 3 - Prevalence index is ≤3.0*

____ 4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? No

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

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-14	10YR 4/3	85	10YR 5/8	10	C	M	silt loam	
			10YR 4/6	5	C	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils:	
<input type="checkbox"/> Histisol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) (LRR N) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR,N MLRA 147, 148) <input type="checkbox"/> Sandy Gley Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S9) (MLRA 147, 148) <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N MLRA 136) <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)	<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
		*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric soil present? <u> No </u>
---	--

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/11/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP44
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.182361 Long.: -85.867878 Datum: _____
 Soil Map Unit Name: ScB - Sciotoville silt loam, 2 to 6 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>No</u> Hydric soil present? <u>No</u> Wetland hydrology present? <u>No</u>	Is the Sampled Area within a Wetland? <u>No</u>
---	---

Remarks: (Explain alternative procedures here or in a separate report.)
 Upland data point in flat woods.

HYDROLOGY

Wetland Hydrology Indicators		
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:				Wetland hydrology present? <u>No</u>
Surface water present?	Yes <u> </u>	No <u>X</u>	Depth (inches): <u>N/A</u>	
Water table present?	Yes <u> </u>	No <u>X</u>	Depth (inches): <u>N/A</u>	
Saturation present? (includes capillary fringe)	Yes <u> </u>	No <u>X</u>	Depth (inches): <u>N/A</u>	

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP44

<u>Tree Stratum</u>		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer rubrum</i>		70	Yes	FAC
2	<i>Prunus serotina</i>		30	Yes	FACU
3					
4					
5					
6					
7					
8					
9					
10					
			100	=	Total Cover

<u>Sapling/Shrub Stratum</u>		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Rosa multiflora</i>		70	Yes	FACU
2	<i>Acer negundo</i>		10	No	FAC
3					
4					
5					
6					
7					
8					
9					
10					
			80	=	Total Cover

<u>Herb Stratum</u>		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		20	Yes	FACU
2	<i>Rubus allegheniensis</i>		5	No	FACU
3	<i>Microstegium vimineum</i>		5	No	FAC
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			30	=	Total Cover

<u>Woody Vine Stratum</u>		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lonicera japonica</i>		60	Yes	FACU
2					
3					
4					
5					
			60	=	Total Cover

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 5 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 20.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

____ 1 - Rapid test for hydrophytic vegetation

____ 2 - Dominance test is >50%

____ 3 - Prevalence index is ≤3.0*

____ 4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? No

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

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 4/4	100					silt loam	
3-14	10YR 5/4	100					silt loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histisol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR N)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Muck Mineral (S1) (LRR,N MLRA 147, 148)</p> <p><input type="checkbox"/> Sandy Gley Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p>	<p>Indicators for Problematic Hydric Soils:</p> <p><input type="checkbox"/> Dark Surface (S7)</p> <p><input type="checkbox"/> Polyvalue Below Surface (S9) (MLRA 147, 148)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N MLRA 136)</p> <p><input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148)</p> <p><input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)</p>	<p><input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p> *Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic</p>
---	--	--

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric soil present? <u> No </u></p>
--	---

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/11/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP45
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.18308 Long.: -85.869656 Datum: _____
 Soil Map Unit Name: OTC - Otwood silt loam, 6 to 12 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>No</u> Wetland hydrology present? <u>No</u>	Is the Sampled Area within a Wetland? <u>No</u>
--	---

Remarks: (Explain alternative procedures here or in a separate report.)
 Upland data point to Wetland 20.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>No</u>
---	--

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP45

Tree Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer negundo</i>		40	Yes	FAC
2	<i>Quercus rubra</i>		30	Yes	FACU
3					
4					
5					
6					
7					
8					
9					
10					
			70	=	Total Cover

Sapling/Shrub Stratum		Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Lindera benzoin</i>		40	Yes	FAC
2	<i>Lonicera maackii</i>		40	Yes	UPL
3	<i>Rosa multiflora</i>		8	No	FACU
4					
5					
6					
7					
8					
9					
10					
			88	=	Total Cover

Herb Stratum		Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Carex blanda</i>		10	Yes	FAC
2	<i>Microstegium vimineum</i>		10	Yes	FAC
3	<i>Elymus virginicus</i>		5	No	FACW
4	<i>Allium vineale</i>		2	No	FACU
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
			27	=	Total Cover

Woody Vine Stratum		Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1					
2					
3					
4					
5					
			0	=	Total Cover

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across all Strata: 6 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 66.67% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column totals _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

1 - Rapid test for hydrophytic vegetation

2 - Dominance test is >50%

3 - Prevalence index is ≤3.0*

4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 3/3	100					silt loam	
2-10	10YR 3/3	70	2.5Y 4/2	30	D	M	silty clay	
10-14	10YR 4/3	92	10YR 3/2	5	D	M	sandy clay	
			10YR 5/8	3	C	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils:	
<input type="checkbox"/> Histisol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) (LRR N) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR,N MLRA 147, 148) <input type="checkbox"/> Sandy Gley Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S9) (MLRA 147, 148) <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N MLRA 136) <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)	<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
		*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric soil present? <u> No </u>
---	--

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 3500 Lees Lane Property City/County: Louisville/ Jefferson Sampling Date: 1/11/2021
 Applicant/Owner: LDG Development, LLC State: Kentucky Sampling Point: DP46
 Investigator(s): K. Ilnick; J. Evans Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Toe of slope Local relief (concave, convex, none): concave Slope (%): 0-1
 Subregion (LRR or MLRA) LRR N Lat.: 38.18294 Long.: -85.869525 Datum: _____
 Soil Map Unit Name: OTC - Otwood silt loam, 6 to 12 percent slopes NWI Classification: _____
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes (If no, explain in remarks)
 Are vegetation _____, soil _____, or hydrology _____ significantly disturbed? Are "normal circumstances" present? Yes
 Are vegetation _____, soil _____, or hydrology _____ naturally problematic? (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS

Hydrophytic vegetation present? <u>Yes</u> Hydric soil present? <u>Yes</u> Wetland hydrology present? <u>Yes</u>	Is the Sampled Area within a Wetland? <u>Yes</u>
--	--

Remarks: (Explain alternative procedures here or in a separate report.)
 Data point to Wetland 20.

HYDROLOGY

Wetland Hydrology Indicators	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface water present? Yes <u>X</u> No _____ Depth (inches): <u>1-2</u> Water table present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Saturation present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> (includes capillary fringe)	Wetland hydrology present? <u>Yes</u>
---	---

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) -- Use scientific names of plants

Sampling Point: DP46

Tree Stratum	Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
		0 =	Total Cover	

Sapling/Shrub Stratum	Plot Size (15')	Absolute % Cover	Dominant Species	Indicator Status
1	<i>Acer negundo</i>	5	Yes	FAC
2				
3				
4				
5				
6				
7				
8				
9				
10				
		5 =	Total Cover	

Herb Stratum	Plot Size (5')	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
		0 =	Total Cover	

Woody Vine Stratum	Plot Size (30')	Absolute % Cover	Dominant Species	Indicator Status
1				
2				
3				
4				
5				
		0 =	Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 1 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species x 1 =

FACW species x 2 =

FAC species x 3 =

FACU species x 4 =

UPL species x 5 =

Column totals (A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

 1 - Rapid test for hydrophytic vegetation

2 - Dominance test is >50%

 3 - Prevalence index is ≤3.0*

 4 - Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)

 Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Definitions of Four Vegetation Strata

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

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

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

Woody vines - All woody vines greater than 3.28 ft in height.

Hydrophytic vegetation present? Yes

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

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 4/2	97	5YR 4/6	3	C	M	silty clay	
3-14	2.5Y 3/2	87	10YR 5/8	10	C	M	clay	
			5YR 4/6	3	C	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains - ²Location: PL=Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils:

- | | | |
|---|--|--|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> (MLRA 147, 148) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| <input type="checkbox"/> Stratified Layers (A5) | <input checked="" type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> (MLRA 136, 147) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR,N MLRA 147, 148) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N MLRA 136) | |
| <input type="checkbox"/> Sandy Gley Matrix (S4) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) | |

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric soil present? Yes

Remarks:

APPENDIX B


RAPID BIOASSESSMENT PROTOCOL FORMS

High Gradient Bioassessment Stream Visit Sheet

STREAM NAME: Intermittent Stream 1				LOCATION: 3500 Lees Lane Property			
STATION #: RBP 1				COUNTY: Jefferson		PROJECT: 103689	
INVESTIGATORS: K. Ilnick, T. Evans				DATE: 1/5/2021		TIME: 3:40	AM <input type="checkbox"/> PM <input checked="" type="checkbox"/>
Verify Site LAT/LONG vs GPS Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>				CANOPY COVER::		STREAM TYPE:	
				Fully Exposed (0-25%) <input type="checkbox"/>		Perennial <input type="checkbox"/>	
				Partially Exposed (25-50%) <input type="checkbox"/>		Ephemeral <input type="checkbox"/>	
				Partially Shaded (50-75%) <input type="checkbox"/>		Intermittent <input checked="" type="checkbox"/>	
				Fully Shaded (75-100%) <input checked="" type="checkbox"/>			
		Station		Downstream		Upstream	
LAT		38.186366					
LONG		-85.865952					
WEATHER				LOCAL WATERSHED FEATURES (Predominant Surrounding Land Use):			
		Now		Past 24 hours			
Has there been a scouring rain in the last 14 days?		<input type="checkbox"/>		<input type="checkbox"/>		Heavy rain <input type="checkbox"/>	
		<input type="checkbox"/>		<input type="checkbox"/>		Steady rain <input type="checkbox"/>	
		<input type="checkbox"/>		<input type="checkbox"/>		Intermittent showers <input type="checkbox"/>	
Yes <input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		Clear/sunny <input type="checkbox"/>	
No <input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		Cloudy <input type="checkbox"/>	
		Surface Mining <input type="checkbox"/>		Construction <input type="checkbox"/>		Forest <input checked="" type="checkbox"/>	
		Deep Mining <input type="checkbox"/>		Commercial <input type="checkbox"/>		Pasture/Grazing <input type="checkbox"/>	
		Oil Wells <input type="checkbox"/>		Industrial <input type="checkbox"/>		Silviculture <input type="checkbox"/>	
		Land Disposal <input type="checkbox"/>		Row Crops <input type="checkbox"/>		Urban Runoff/Storm Sewers <input type="checkbox"/>	
		Residential <input type="checkbox"/>					
INSTREAM FEATURES		HYDRAULIC STRUCTURES		STREAM FLOW		RIPARIAN VEGETATION	
Stream Width 4 ft		Dams <input type="checkbox"/>		Dry <input type="checkbox"/>		Trees <input checked="" type="checkbox"/> Herbaceous <input checked="" type="checkbox"/>	
Maximum Depth 0.25 ft		Bridge Abutments <input type="checkbox"/>		Pooled <input type="checkbox"/>		Grasses <input checked="" type="checkbox"/> Shrubs <input checked="" type="checkbox"/>	
Reach Length 1,280 m		Island <input type="checkbox"/>		Low <input type="checkbox"/>		Dom. Tree/Shrub Taxa:	
Discharge cfs		Waterfalls <input type="checkbox"/>		High <input type="checkbox"/>		<i>Quercus palustris</i>	
		Other: <input type="checkbox"/>		Normal <input checked="" type="checkbox"/>		<i>Prunus serotina</i>	
						<i>Juglans nigra</i>	
						<i>Ulmus rubra</i>	
Riffle/Run/Pool Sequence				(No. Sampled in Reach) _____ Riffle _____ Run _____ Pool			
P-CHEM				Instrument Used: _____ Date Calibrated: _____			
Temp(°F) _____		D.O. (mg/l) _____		%Saturation _____		pH(S.U.) _____	
						Cond. (µS/cm) _____	
						Turb. _____	

Substrate Characterization												
Substrate	Est.	P.C.	Riffle	10	%	Run	30	%	Pool	60	%	Reach Total
Silt/Clay (<0.06 mm/0.002 in)				X			X			X		
Sand (0.06–2 mm/0.002–0.08 in)												
Gravel (2–64 mm/0.08–2.52 in)												
Cobble (64–256 mm/2.52–10.08 in)												
Boulders (>256 mm/10.08 in)												
Bedrock												

NOTES/COMMENTS:			
	Bluegrass Bioregion (High Gradient Assessments)	Headwater (<5.0 mi²)	Wadeable (>5.0 mi²)
Fully Supporting	(Excellent)	156-200	130-200
Supporting but Threatened and Partially Supporting	(Average)	142-155	114-129
Not Supporting	(Poor)	0-141	0-113
Kentucky Division of Water's "Methods for Assessing Habitat in Wadeable Waters" (2011) (Revision 1)			




Project Name: 3500 Lees Lane Property		Stream Name: Intermittent Stream 1																		
RBP High Gradient Habitat																				
Habitat Parameter	Condition Category																			
	Optimal					Suboptimal					Marginal					Poor				
SCORE	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
1. Epifaunal Substrate/ Available Cover 3 Score	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).					40-70% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of new fall, but not yet prepared for colonization (may rate at high end of scale).					20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.					Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.				
2. Embeddedness 3 Score	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.					Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.					Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.					Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.				
3. Velocity/Depth Regime 2 Score	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). (Slow is < 0.3 m/s, deep is > 0.5 m.)					Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).					Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).					Dominated by 1 velocity/ depth regime (usually slow-deep).				
4. Sediment Deposition 11 Score	Little or no enlargement of islands or point bars and less than 5% (<20% for low-gradient streams) of the bottom affected by sediment deposition.					Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% (20-50% for low-gradient) of the bottom affected; slight deposition in pools.					Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% (50-80% for low-gradient) of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.					Heavy deposits of fine material, increased bar development; more than 50% (80% for low-gradient) of the bottom changing frequently; pools almost absent due to substantial sediment deposition.				
5. Channel Flow Status 16 Score	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.					Water fills >75% of the available channel; or <25% of channel substrate is exposed.					Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.					Very little water in channel and mostly present as standing pools.				
6. Channel Alteration 18 Score	Channelization or dredging absent or minimal; stream with normal pattern.					Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr.) may be present, but recent channelization is not present.					Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.					Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.				
7. Frequency of Riffles (or bends) 11 Score	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.					Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.					Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.					Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ratio of >25.				
Left/Right Bank	10	9	8	7	6	5	4	3	2	1										
8. Bank Stability 4 LB 4 RB Score	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.					Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.					Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.					Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.				
9. Vegetative Protection 4 LB 6 RB Score	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.					70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.					50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.					Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.				
10. Riparian Vegetative Zone Width 9 LB 9 RB Score	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.					Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.					Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.					Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.				
Total Score 100	NOTES/COMMENTS: Poor Quality																			

High Gradient Bioassessment Stream Visit Sheet

STREAM NAME: Intermittent Stream 2				LOCATION: 3500 Lees Lane Property			
STATION #: RBP 2				COUNTY: Jefferson		PROJECT: 103689	
INVESTIGATORS: K. Ilnick, T. Evans				DATE: 1/6/2021		TIME: 2:00	AM <input type="checkbox"/> PM <input checked="" type="checkbox"/>
Verify Site LAT/LONG vs GPS Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>				CANOPY COVER::		STREAM TYPE:	
			Fully Exposed (0-25%) <input type="checkbox"/>		Perennial <input type="checkbox"/>		
			Partially Exposed (25-50%) <input type="checkbox"/>		Ephemeral <input type="checkbox"/>		
			Partially Shaded (50-75%) <input type="checkbox"/>		Intermittent <input checked="" type="checkbox"/>		
			Fully Shaded (75-100%) <input checked="" type="checkbox"/>				
		Station		Downstream		Upstream	
LAT		38.186044					
LONG		-85.865862					
WEATHER				LOCAL WATERSHED FEATURES (Predominant Surrounding Land Use):			
		Now		Past 24 hours			
Has there been a scouring rain in the last 14 days?		<input type="checkbox"/>		<input type="checkbox"/>		Heavy rain <input type="checkbox"/>	
		<input type="checkbox"/>		<input type="checkbox"/>		Steady rain <input type="checkbox"/>	
		<input type="checkbox"/>		<input type="checkbox"/>		Intermittent showers <input type="checkbox"/>	
Yes <input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		Clear/sunny <input type="checkbox"/>	
No <input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		Cloudy <input type="checkbox"/>	
Surface Mining <input type="checkbox"/>		Construction <input type="checkbox"/>		Forest <input checked="" type="checkbox"/>			
Deep Mining <input type="checkbox"/>		Commercial <input type="checkbox"/>		Pasture/Grazing <input type="checkbox"/>			
Oil Wells <input type="checkbox"/>		Industrial <input type="checkbox"/>		Silviculture <input type="checkbox"/>			
Land Disposal <input type="checkbox"/>		Row Crops <input type="checkbox"/>		Urban Runoff/Storm Sewers <input type="checkbox"/>			
Residential <input type="checkbox"/>							
INSTREAM FEATURES		HYDRAULIC STRUCTURES		STREAM FLOW		RIPARIAN VEGETATION	
Stream Width 2-3 ft		Dams <input type="checkbox"/>		Dry <input type="checkbox"/>		Trees <input checked="" type="checkbox"/> Herbaceous <input checked="" type="checkbox"/>	
Maximum Depth 0.25 ft		Bridge Abutments <input type="checkbox"/>		Pooled <input type="checkbox"/>		Grasses <input checked="" type="checkbox"/> Shrubs <input checked="" type="checkbox"/>	
Reach Length 134 m		Island <input type="checkbox"/>		Low <input checked="" type="checkbox"/>		Dom. Tree/Shrub Taxa:	
Discharge _____ cfs		Waterfalls <input type="checkbox"/>		High <input type="checkbox"/>		<i>Lindera benzoin</i>	
		Other: <input type="checkbox"/>		Normal <input type="checkbox"/>		<i>Liriodendron tulipifera</i>	
						<i>Platanus occidentalis</i>	
						<i>Acer negundo</i>	
Riffle/Run/Pool Sequence				(No. Sampled in Reach) _____ Riffle _____ Run _____ Pool			
P-CHEM				Instrument Used: _____ Date Calibrated: _____			
Temp(°F) _____		D.O. (mg/l) _____		%Saturation _____		pH(S.U.) _____	
						Cond. (µS/cm) _____	
						Turb. _____	

Substrate Characterization						
Substrate	Est.	P.C.	Riffle _____ %	Run 100 %	Pool _____ %	Reach Total
Silt/Clay (<0.06 mm/0.002 in)				X		
Sand (0.06–2 mm/0.002–0.08 in)						
Gravel (2–64 mm/0.08–2.52 in)						
Cobble (64–256 mm/2.52–10.08 in)						
Boulders (>256 mm/10.08 in)						
Bedrock						

NOTES/COMMENTS:			
Bluegrass Bioregion (High Gradient Assessments)	Headwater (<5.0 mi²)	Wadeable (>5.0 mi²)	
Fully Supporting	(Excellent)	156-200	
Supporting but Threatened and Partially Supporting	(Average)	142-155	
Not Supporting	(Poor)	0-141	
Kentucky Division of Water's "Methods for Assessing Habitat in Wadeable Waters" (2011) (Revision 1)			


Project Name: 3500 Lees Lane Property		Stream Name: Intermittent Stream 2																		
RBP High Gradient Habitat																				
Habitat Parameter	Condition Category																			
	Optimal					Suboptimal			Marginal		Poor									
SCORE	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
1. Epifaunal Substrate/ Available Cover 3 Score	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).					40-70% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of new fall, but not yet prepared for colonization (may rate at high end of scale).			20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.		Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.									
2. Embeddedness 3 Score	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.					Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.			Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.		Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.									
3. Velocity/Depth Regime 2 Score	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). (Slow is < 0.3 m/s, deep is > 0.5 m.)					Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).			Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).		Dominated by 1 velocity/ depth regime (usually slow-deep).									
4. Sediment Deposition 6 Score	Little or no enlargement of islands or point bars and less than 5% (<20% for low-gradient streams) of the bottom affected by sediment deposition.					Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% (20-50% for low-gradient) of the bottom affected; slight deposition in pools.			Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% (50-80% for low-gradient) of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.		Heavy deposits of fine material, increased bar development; more than 50% (80% for low-gradient) of the bottom changing frequently; pools almost absent due to substantial sediment deposition.									
5. Channel Flow Status 11 Score	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.					Water fills >75% of the available channel; or <25% of channel substrate is exposed.			Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.		Very little water in channel and mostly present as standing pools.									
6. Channel Alteration 18 Score	Channelization or dredging absent or minimal; stream with normal pattern.					Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr.) may be present, but recent channelization is not present.			Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.		Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.									
7. Frequency of Riffles (or bends) 5 Score	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.					Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.			Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.		Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ratio of >25.									
Left/Right Bank	10	9				8	7	6			5	4	3			2	1			
8. Bank Stability 7 LB 7 RB Score	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.					Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.			Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.		Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.									
9. Vegetative Protection 8 LB 8 RB Score	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.					70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.			50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.		Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.									
10. Riparian Vegetative Zone Width 9 LB 9 RB Score	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.					Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.			Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.		Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.									
Total Score 96	NOTES/COMMENTS: Poor Quality																			

High Gradient Bioassessment Stream Visit Sheet

STREAM NAME: Intermittent Stream 3			LOCATION: 3500 Lees Lane Property								
STATION #: RBP 3			COUNTY: Jefferson		PROJECT: 103689						
INVESTIGATORS: K. Ilnick, T. Evans			DATE: 1/7/2021	TIME: 10:30	AM <input checked="" type="checkbox"/> PM <input type="checkbox"/>						
Verify Site LAT/LONG vs GPS Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>			CANOPY COVER::		STREAM TYPE:						
	Station	Downstream	Upstream	Fully Exposed (0-25%) <input type="checkbox"/>	Perennial <input type="checkbox"/>						
LAT	38.183269			Partially Exposed (25-50%) <input type="checkbox"/>	Ephemeral <input type="checkbox"/>						
LONG	-85.866449			Partially Shaded (50-75%) <input type="checkbox"/>	Intermittent <input checked="" type="checkbox"/>						
				Fully Shaded (75-100%) <input checked="" type="checkbox"/>							
WEATHER			LOCAL WATERSHED FEATURES (Predominant Surrounding Land Use):								
	Now	Past 24 hours									
Has there been a scouring rain in the last 14 days?	<input type="checkbox"/>	<input type="checkbox"/>	Heavy rain	Surface Mining <input type="checkbox"/>	Construction <input type="checkbox"/>	Forest <input checked="" type="checkbox"/>					
	<input type="checkbox"/>	<input type="checkbox"/>	Steady rain	Deep Mining <input type="checkbox"/>	Commercial <input type="checkbox"/>	Pasture/Grazing <input type="checkbox"/>					
	<input type="checkbox"/>	<input type="checkbox"/>	Intermittent showers	Oil Wells <input type="checkbox"/>	Industrial <input type="checkbox"/>	Silviculture <input type="checkbox"/>					
Yes <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Clear/sunny	Land Disposal <input type="checkbox"/>	Row Crops <input type="checkbox"/>	Urban Runoff/Storm Sewers <input type="checkbox"/>					
No <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Cloudy	Residential <input type="checkbox"/>							
INSTREAM FEATURES		HYDRAULIC STRUCTURES	STREAM FLOW	RIPARIAN VEGETATION		CHANNEL ALTERATIONS					
Stream Width	3-4 ft	Dams <input type="checkbox"/>	Dry <input type="checkbox"/>	Trees <input checked="" type="checkbox"/>	Herbaceous <input checked="" type="checkbox"/>	Dredging <input type="checkbox"/>					
Maximum Depth	0.5 ft	Bridge Abutments <input type="checkbox"/>	Pooled <input type="checkbox"/>	Grasses <input checked="" type="checkbox"/>	Shrubs <input checked="" type="checkbox"/>	Channelization <input type="checkbox"/>					
Reach Length	547 m	Island <input type="checkbox"/>	Low <input checked="" type="checkbox"/>	Dom. Tree/Shrub Taxa:		(Full) <input type="checkbox"/> (Partial) <input type="checkbox"/>					
Discharge	_____ cfs	Waterfalls <input type="checkbox"/>	High <input type="checkbox"/>	<i>Acer rubrum</i>		<i>Quercus palustris</i>					
		Other: <input type="checkbox"/>	Normal <input type="checkbox"/>	<i>Liquidambar styraciflua</i>		<i>Fraxinus pennsylvanica</i>					
Riffle/Run/Pool Sequence			(No. Sampled in Reach) _____ Riffle _____ Run _____ Pool								
P-CHEM			Instrument Used:		Date Calibrated:						
Temp(°F)	_____	D.O. (mg/l)	_____	%Saturation	_____	pH(S.U.)	_____	Cond. (µS/cm)	_____	Turb.	_____

Substrate Characterization						
Substrate	Est.	P.C.	Riffle _____ %	Run _____ 30 %	Pool _____ 70 %	Reach Total
Silt/Clay (<0.06 mm/0.002 in)				X	X	
Sand (0.06–2 mm/0.002–0.08 in)						
Gravel (2–64 mm/0.08–2.52 in)						
Cobble (64–256 mm/2.52–10.08 in)						
Boulders (>256 mm/10.08 in)						
Bedrock						

NOTES/COMMENTS:			
	Bluegrass Bioregion (High Gradient Assessments)	Headwater (<5.0 mi²)	Wadeable (>5.0 mi²)
Fully Supporting	(Excellent)	156-200	130-200
Supporting but Threatened and Partially Supporting	(Average)	142-155	114-129
Not Supporting	(Poor)	0-141	0-113
Kentucky Division of Water's "Methods for Assessing Habitat in Wadeable Waters" (2011) (Revision 1)			




Project Name: 3500 Lees Lane Property		Stream Name: Intermittent Stream 3																		
RBP High Gradient Habitat																				
Habitat Parameter	Condition Category																			
	Optimal					Suboptimal					Marginal					Poor				
SCORE	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
1. Epifaunal Substrate/ Available Cover 3 Score	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).					40-70% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of new fall, but not yet prepared for colonization (may rate at high end of scale).					20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.					Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.				
2. Embeddedness 3 Score	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.					Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.					Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.					Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.				
3. Velocity/Depth Regime 3 Score	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). (Slow is < 0.3 m/s, deep is > 0.5 m.)					Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).					Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).					Dominated by 1 velocity/ depth regime (usually slow-deep).				
4. Sediment Deposition 3 Score	Little or no enlargement of islands or point bars and less than 5% (<20% for low-gradient streams) of the bottom affected by sediment deposition.					Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% (20-50% for low-gradient) of the bottom affected; slight deposition in pools.					Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% (50-80% for low-gradient) of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.					Heavy deposits of fine material, increased bar development; more than 50% (80% for low-gradient) of the bottom changing frequently; pools almost absent due to substantial sediment deposition.				
5. Channel Flow Status 10 Score	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.					Water fills >75% of the available channel; or <25% of channel substrate is exposed.					Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.					Very little water in channel and mostly present as standing pools.				
6. Channel Alteration 18 Score	Channelization or dredging absent or minimal; stream with normal pattern.					Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr.) may be present, but recent channelization is not present.					Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.					Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.				
7. Frequency of Riffles (or bends) 5 Score	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.					Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.					Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.					Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ratio of >25.				
Left/Right Bank	10	9				8	7	6			5	4	3			2	1			
8. Bank Stability 2 LB 2 RB Score	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.					Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.					Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.					Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.				
9. Vegetative Protection 4 LB 4 RB Score	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.					70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.					50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.					Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.				
10. Riparian Vegetative Zone Width 8 LB 8 RB Score	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.					Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.					Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.					Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.				
Total Score 73	NOTES/COMMENTS: Poor Quality																			

Project Name: 3500 Lees Lane Property		Stream Name: Intermittent Stream 4																		
RBP High Gradient Habitat																				
Habitat Parameter	Condition Category																			
	Optimal					Suboptimal			Marginal		Poor									
SCORE	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
1. Epifaunal Substrate/ Available Cover 3 Score	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).					40-70% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of new fall, but not yet prepared for colonization (may rate at high end of scale).			20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.		Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.									
2. Embeddedness 3 Score	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.					Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.			Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.		Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.									
3. Velocity/Depth Regime 3 Score	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). (Slow is < 0.3 m/s, deep is > 0.5 m.)					Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).			Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).		Dominated by 1 velocity/ depth regime (usually slow-deep).									
4. Sediment Deposition 8 Score	Little or no enlargement of islands or point bars and less than 5% (<20% for low-gradient streams) of the bottom affected by sediment deposition.					Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% (20-50% for low-gradient) of the bottom affected; slight deposition in pools.			Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% (50-80% for low-gradient) of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.		Heavy deposits of fine material, increased bar development; more than 50% (80% for low-gradient) of the bottom changing frequently; pools almost absent due to substantial sediment deposition.									
5. Channel Flow Status 11 Score	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.					Water fills >75% of the available channel; or <25% of channel substrate is exposed.			Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.		Very little water in channel and mostly present as standing pools.									
6. Channel Alteration 18 Score	Channelization or dredging absent or minimal; stream with normal pattern.					Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr.) may be present, but recent channelization is not present.			Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.		Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.									
7. Frequency of Riffles (or bends) 8 Score	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.					Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.			Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.		Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ratio of >25.									
Left/Right Bank	10	9	8	7	6	5	4	3	2	1										
8. Bank Stability 3 LB 3 RB Score	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.					Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.			Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.		Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.									
9. Vegetative Protection 5 LB 5 RB Score	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.					70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.			50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.		Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.									
10. Riparian Vegetative Zone Width 9 LB 9 RB Score	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.					Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.			Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.		Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.									
Total Score 88	NOTES/COMMENTS: Poor Quality																			

High Gradient Bioassessment Stream Visit Sheet

STREAM NAME: Intermittent Stream 5				LOCATION: 3500 Lees Lane Property			
STATION #: RBP 5				COUNTY: Jefferson		PROJECT: 103689	
INVESTIGATORS: K. Ilnick, T. Evans				DATE: 1/7/2021		TIME: 3:00	AM <input type="checkbox"/> PM <input checked="" type="checkbox"/>
Verify Site LAT/LONG vs GPS Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>				CANOPY COVER::		STREAM TYPE:	
				Fully Exposed (0-25%) <input type="checkbox"/>		Perennial <input type="checkbox"/>	
				Partially Exposed (25-50%) <input type="checkbox"/>		Ephemeral <input type="checkbox"/>	
				Partially Shaded (50-75%) <input type="checkbox"/>		Intermittent <input checked="" type="checkbox"/>	
				Fully Shaded (75-100%) <input checked="" type="checkbox"/>			
		Station		Downstream		Upstream	
LAT		38.184486					
LONG		-85.869635					
WEATHER				LOCAL WATERSHED FEATURES (Predominant Surrounding Land Use):			
		Now		Past 24 hours			
Has there been a scouring rain in the last 14 days?		<input type="checkbox"/>		<input type="checkbox"/>		Heavy rain <input type="checkbox"/>	
		<input type="checkbox"/>		<input type="checkbox"/>		Steady rain <input type="checkbox"/>	
		<input type="checkbox"/>		<input type="checkbox"/>		Intermittent showers <input type="checkbox"/>	
Yes <input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		Clear/sunny <input type="checkbox"/>	
No <input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		Cloudy <input type="checkbox"/>	
Surface Mining <input type="checkbox"/>		Construction <input type="checkbox"/>		Forest <input checked="" type="checkbox"/>			
Deep Mining <input type="checkbox"/>		Commercial <input type="checkbox"/>		Pasture/Grazing <input type="checkbox"/>			
Oil Wells <input type="checkbox"/>		Industrial <input type="checkbox"/>		Silviculture <input type="checkbox"/>			
Land Disposal <input type="checkbox"/>		Row Crops <input type="checkbox"/>		Urban Runoff/Storm Sewers <input type="checkbox"/>			
Residential <input type="checkbox"/>							
INSTREAM FEATURES		HYDRAULIC STRUCTURES		STREAM FLOW		RIPARIAN VEGETATION	
Stream Width 2 ft		Dams <input type="checkbox"/>		Dry <input type="checkbox"/>		Trees <input checked="" type="checkbox"/> Herbaceous <input checked="" type="checkbox"/>	
Maximum Depth 0.25 ft		Bridge Abutments <input type="checkbox"/>		Pooled <input type="checkbox"/>		Grasses <input checked="" type="checkbox"/> Shrubs <input checked="" type="checkbox"/>	
Reach Length 96 m		Island <input type="checkbox"/>		Low <input checked="" type="checkbox"/>		Dom. Tree/Shrub Taxa:	
Discharge _____ cfs		Waterfalls <input type="checkbox"/>		High <input type="checkbox"/>		<i>Quercus palustris</i>	
		Other: <input type="checkbox"/>		Normal <input type="checkbox"/>		<i>Prunus serotina</i>	
						<i>Celtis occidentalis</i>	
						<i>Ligustrum vulgare</i>	
Riffle/Run/Pool Sequence				(No. Sampled in Reach) _____ Riffle _____ Run _____ Pool			
P-CHEM				Instrument Used: _____ Date Calibrated: _____			
Temp(°F) _____		D.O. (mg/l) _____		%Saturation _____		pH(S.U.) _____	
						Cond. (µS/cm) _____	
						Turb. _____	

Substrate Characterization						
Substrate	Est.	P.C.	Riffle _____ %	Run 100 %	Pool _____ %	Reach Total
Silt/Clay (<0.06 mm/0.002 in)				X		
Sand (0.06–2 mm/0.002–0.08 in)						
Gravel (2–64 mm/0.08–2.52 in)						
Cobble (64–256 mm/2.52–10.08 in)						
Boulders (>256 mm/10.08 in)						
Bedrock						

NOTES/COMMENTS:			
Bluegrass Bioregion (High Gradient Assessments)	Headwater (<5.0 mi²)	Wadeable (>5.0 mi²)	
Fully Supporting	(Excellent)	156-200	
Supporting but Threatened and Partially Supporting	(Average)	142-155	
Not Supporting	(Poor)	0-141	
Kentucky Division of Water's "Methods for Assessing Habitat in Wadeable Waters" (2011) (Revision 1)			


Project Name: 3500 Lees Lane Property		Stream Name: Intermittent Stream 5																		
RBP High Gradient Habitat																				
Habitat Parameter	Condition Category																			
	Optimal					Suboptimal			Marginal		Poor									
SCORE	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
1. Epifaunal Substrate/ Available Cover 3 Score	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).					40-70% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of new fall, but not yet prepared for colonization (may rate at high end of scale).					20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.			Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.						
2. Embeddedness 3 Score	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.					Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.					Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.			Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.						
3. Velocity/Depth Regime 2 Score	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). (Slow is < 0.3 m/s, deep is > 0.5 m.)					Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).					Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).			Dominated by 1 velocity/ depth regime (usually slow-deep).						
4. Sediment Deposition 8 Score	Little or no enlargement of islands or point bars and less than 5% (<20% for low-gradient streams) of the bottom affected by sediment deposition.					Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% (20-50% for low-gradient) of the bottom affected; slight deposition in pools.					Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% (50-80% for low-gradient) of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.			Heavy deposits of fine material, increased bar development; more than 50% (80% for low-gradient) of the bottom changing frequently; pools almost absent due to substantial sediment deposition.						
5. Channel Flow Status 10 Score	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.					Water fills >75% of the available channel; or <25% of channel substrate is exposed.					Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.			Very little water in channel and mostly present as standing pools.						
6. Channel Alteration 15 Score	Channelization or dredging absent or minimal; stream with normal pattern.					Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr.) may be present, but recent channelization is not present.					Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.			Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.						
7. Frequency of Riffles (or bends) 8 Score	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.					Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.					Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.			Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ratio of >25.						
Left/Right Bank	10	9				8	7	6			5	4	3			2	1			
8. Bank Stability 3 LB 3 RB Score	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.					Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.					Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.			Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.						
9. Vegetative Protection 5 LB 5 RB Score	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.					70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.					50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.			Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.						
10. Riparian Vegetative Zone Width 9 LB 9 RB Score	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.					Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.					Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.			Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.						
Total Score 83	NOTES/COMMENTS: Poor Quality																			

High Gradient Bioassessment Stream Visit Sheet

STREAM NAME: Intermittent Stream 6				LOCATION: 3500 Lees Lane Property			
STATION #: RBP 6				COUNTY: Jefferson		PROJECT: 103689	
INVESTIGATORS: K. Ilnick, T. Evans				DATE: 1/11/2021		TIME: 10:00	AM <input checked="" type="checkbox"/> PM <input type="checkbox"/>
Verify Site LAT/LONG vs GPS Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>				CANOPY COVER::		STREAM TYPE:	
				Fully Exposed (0-25%) <input type="checkbox"/>		Perennial <input type="checkbox"/>	
				Partially Exposed (25-50%) <input type="checkbox"/>		Ephemeral <input type="checkbox"/>	
				Partially Shaded (50-75%) <input type="checkbox"/>		Intermittent <input checked="" type="checkbox"/>	
				Fully Shaded (75-100%) <input checked="" type="checkbox"/>			
		Station		Downstream		Upstream	
LAT		38.182346					
LONG		-85.869403					
WEATHER				LOCAL WATERSHED FEATURES (Predominant Surrounding Land Use):			
		Now		Past 24 hours			
Has there been a scouring rain in the last 14 days?		<input type="checkbox"/>		<input type="checkbox"/>		Heavy rain <input type="checkbox"/>	
		<input type="checkbox"/>		<input type="checkbox"/>		Steady rain <input type="checkbox"/>	
		<input type="checkbox"/>		<input type="checkbox"/>		Intermittent showers <input type="checkbox"/>	
Yes <input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		Clear/sunny <input type="checkbox"/>	
No <input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		Cloudy <input type="checkbox"/>	
Surface Mining <input type="checkbox"/>		Construction <input type="checkbox"/>		Forest <input checked="" type="checkbox"/>			
Deep Mining <input type="checkbox"/>		Commercial <input type="checkbox"/>		Pasture/Grazing <input type="checkbox"/>			
Oil Wells <input type="checkbox"/>		Industrial <input type="checkbox"/>		Silviculture <input type="checkbox"/>			
Land Disposal <input type="checkbox"/>		Row Crops <input type="checkbox"/>		Urban Runoff/Storm Sewers <input type="checkbox"/>			
Residential <input type="checkbox"/>							
INSTREAM FEATURES		HYDRAULIC STRUCTURES		STREAM FLOW		RIPARIAN VEGETATION	
Stream Width 4-5 ft		Dams <input type="checkbox"/>		Dry <input checked="" type="checkbox"/>		Trees <input checked="" type="checkbox"/> Herbaceous <input checked="" type="checkbox"/>	
Maximum Depth 0.1 ft		Bridge Abutments <input type="checkbox"/>		Pooled <input type="checkbox"/>		Grasses <input checked="" type="checkbox"/> Shrubs <input checked="" type="checkbox"/>	
Reach Length 288 m		Island <input type="checkbox"/>		Low <input type="checkbox"/>		Dom. Tree/Shrub Taxa:	
Discharge _____ cfs		Waterfalls <input type="checkbox"/>		High <input type="checkbox"/>		<i>Acer negundo</i>	
		Other: <input type="checkbox"/>		Normal <input type="checkbox"/>		<i>Platanus occidentalis</i>	
						<i>Acer rubrum</i>	
						<i>Quercus palustris</i>	
Riffle/Run/Pool Sequence				(No. Sampled in Reach) _____ Riffle _____ Run _____ Pool			
P-CHEM				Instrument Used: _____ Date Calibrated: _____			
Temp(°F) _____		D.O. (mg/l) _____		%Saturation _____		pH(S.U.) _____	
						Cond. (µS/cm) _____	
						Turb. _____	

Substrate Characterization						
Substrate	Est.	P.C.	Riffle _____ %	Run _____ 90 %	Pool _____ 10 %	Reach Total
Silt/Clay (<0.06 mm/0.002 in)						
Sand (0.06–2 mm/0.002–0.08 in)				X	X	
Gravel (2–64 mm/0.08–2.52 in)						
Cobble (64–256 mm/2.52–10.08 in)						
Boulders (>256 mm/10.08 in)						
Bedrock						

NOTES/COMMENTS:			
	Bluegrass Bioregion (High Gradient Assessments)	Headwater (<5.0 mi²)	Wadeable (>5.0 mi²)
Fully Supporting	(Excellent)	156-200	130-200
Supporting but Threatened and Partially Supporting	(Average)	142-155	114-129
Not Supporting	(Poor)	0-141	0-113
Kentucky Division of Water's "Methods for Assessing Habitat in Wadeable Waters" (2011) (Revision 1)			



Project Name: 3500 Lees Lane Property		Stream Name: Intermittent Stream 6																		
RBP High Gradient Habitat																				
Habitat Parameter	Condition Category																			
	Optimal					Suboptimal			Marginal		Poor									
SCORE	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
1. Epifaunal Substrate/ Available Cover 2 Score	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).					40-70% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of new fall, but not yet prepared for colonization (may rate at high end of scale).					20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.			Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.						
2. Embeddedness 2 Score	Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space.					Gravel, cobble, and boulder particles are 25-50% surrounded by fine sediment.					Gravel, cobble, and boulder particles are 50-75% surrounded by fine sediment.			Gravel, cobble, and boulder particles are more than 75% surrounded by fine sediment.						
3. Velocity/Depth Regime 3 Score	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). (Slow is < 0.3 m/s, deep is > 0.5 m.)					Only 3 of the 4 regimes present (if fast-shallow is missing, score lower than if missing other regimes).					Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).			Dominated by 1 velocity/ depth regime (usually slow-deep).						
4. Sediment Deposition 3 Score	Little or no enlargement of islands or point bars and less than 5% (<20% for low-gradient streams) of the bottom affected by sediment deposition.					Some new increase in bar formation, mostly from gravel, sand or fine sediment; 5-30% (20-50% for low-gradient) of the bottom affected; slight deposition in pools.					Moderate deposition of new gravel, sand or fine sediment on old and new bars; 30-50% (50-80% for low-gradient) of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.			Heavy deposits of fine material, increased bar development; more than 50% (80% for low-gradient) of the bottom changing frequently; pools almost absent due to substantial sediment deposition.						
5. Channel Flow Status 5 Score	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.					Water fills >75% of the available channel; or <25% of channel substrate is exposed.					Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.			Very little water in channel and mostly present as standing pools.						
6. Channel Alteration 7 Score	Channelization or dredging absent or minimal; stream with normal pattern.					Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr.) may be present, but recent channelization is not present.					Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.			Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.						
7. Frequency of Riffles (or bends) 5 Score	Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important.					Occurrence of riffles infrequent; distance between riffles divided by the width of the stream is between 7 to 15.					Occasional riffle or bend; bottom contours provide some habitat; distance between riffles divided by the width of the stream is between 15 to 25.			Generally all flat water or shallow riffles; poor habitat; distance between riffles divided by the width of the stream is a ratio of >25.						
Left/Right Bank	10	9				8	7	6			5	4	3			2	1			
8. Bank Stability 3 LB 3 RB Score	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.					Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.					Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.			Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.						
9. Vegetative Protection 5 LB 5 RB Score	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.					70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.					50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.			Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.						
10. Riparian Vegetative Zone Width 9 LB 9 RB Score	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.					Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.					Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.			Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.						
Total Score 61	NOTES/COMMENTS: Poor Quality																			

APPENDIX C

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

- 1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.
- 2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring “pre-construction notification” (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant’s acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there “*may be*” waters of the U.S. and/or that there “*may be*” navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

- Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
Map: _____.
- Data sheets prepared/submitted by or on behalf of the PJD requestor.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report. Rationale: _____.
- Data sheets prepared by the Corps: _____.
- Corps navigable waters' study: _____.
- U.S. Geological Survey Hydrologic Atlas: _____.
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: _____.
- Natural Resources Conservation Service Soil Survey. Citation: _____.
- National wetlands inventory map(s). Cite name: _____.
- State/local wetland inventory map(s): _____.
- FEMA/FIRM maps: _____.
- 100-year Floodplain Elevation is: _____.(National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): _____
or Other (Name & Date): _____.
- Previous determination(s). File no. and date of response letter: _____.
- Other information (please specify): _____.

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Signature and date of
Regulatory staff member
completing PJD

Signature and date of
person requesting PJD
(REQUIRED, unless obtaining
the signature is impracticable)¹

¹ Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

3500 Lees Lane Property
Jefferson County, Kentucky

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
Intermittent 1	38.186222	-85.865936	4,230 linear feet (0.583 acre)	non-wetland	Section 404
Intermittent 2	38.185950	-85.865900	440 linear feet (0.040 acre)	non-wetland	Section 404
Intermittent 3	38.183180	-85.867028	1,795 linear feet (0.185 acre)	non-wetland	Section 404
Intermittent 4	38.184826	-85.869173	315 linear feet (0.022 acre)	non-wetland	Section 404
Intermittent 5	38.184460	-85.869625	315 linear feet (0.014 acre)	non-wetland	Section 404
Intermittent 6	38.182607	-85.869970	945 linear feet (0.098 acre)	non-wetland	Section 404
Ephemeral 1	38.187172	-85.864567	90 linear feet (0.003 acre)	non-wetland	Section 404
Ephemeral 2	38.186458	-85.864949	175 linear feet (0.008 acre)	non-wetland	Section 404
Ephemeral 3	38.186431	-85.865731	25 linear feet (0.001 acre)	non-wetland	Section 404
Ephemeral 4	38.185146	-85.866362	125 linear feet (0.004 acre)	non-wetland	Section 404
Ephemeral 5	38.185068	-85.866503	65 linear feet (0.002 acre)	non-wetland	Section 404
Ephemeral 6	38.184995	-85.867026	135 linear feet (0.006 acre)	non-wetland	Section 404
Ephemeral 7	38.182997	-85.867923	135 linear feet (0.006 acre)	non-wetland	Section 404
Ephemeral 8	38.183059	-85.867207	65 linear feet (0.001 acre)	non-wetland	Section 404
Ephemeral 9	38.183097	-85.866632	35 linear feet (0.001 acre)	non-wetland	Section 404
Ephemeral 10	38.183167	-85.865541	60 linear feet (0.001 acre)	non-wetland	Section 404
Ephemeral 11	38.183355	-85.864270	30 linear feet (0.001 acre)	non-wetland	Section 404
Ephemeral 12	38.184423	-85.868769	140 linear feet (0.010 acre)	non-wetland	Section 404
Ephemeral 13	38.184587	-85.868679	105 linear feet (0.004 acre)	non-wetland	Section 404
Ephemeral 14	38.184800	-85.869314	50 linear feet (0.003 acre)	non-wetland	Section 404
Ephemeral 15	38.184111	-85.870494	85 linear feet (0.004 acre)	non-wetland	Section 404
Ephemeral 16	38.182763	-85.870379	45 linear feet (0.002 acre)	non-wetland	Section 404
Ephemeral 17	38.181379	-85.867317	475 linear feet (0.038 acre)	non-wetland	Section 404
Ephemeral 18	38.183290	-85.869124	85 linear feet (0.002 acre)	non-wetland	Section 404
Ephemeral 19	38.185627	-85.866434	25 linear feet (0.001 acre)	non-wetland	Section 404
Open Water 2	38.187079	-85.862604	0.057 acre	non-wetland	Section 404
Wetland 3	38.186380	-85.867567	0.875 acre	wetland	Section 404
Wetland 4	38.186659	-85.864315	1.596 acre	wetland	Section 404
Wetland 5	38.187281	-85.864829	0.046 acre	wetland	Section 404
Wetland 6	38.187034	-85.865336	0.007 acre	wetland	Section 404
Wetland 7	38.186366	-85.866534	0.063 acre	wetland	Section 404
Wetland 8	38.185360	-85.865393	0.172 acre	wetland	Section 404
Wetland 17	38.184303	-85.870423	0.042 acre	wetland	Section 404

APPENDIX D

APPROVED JURISDICTIONAL DETERMINATION FORM

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): February 2022

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Louisville District, 3500 Lees Lane Property

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Kentucky County/parish/borough: Jefferson City: Louisville
Center coordinates of site (lat/long in degree decimal format): Lat. 38.184667° N, Long. 85.865867° W.
Universal Transverse Mercator:

Name of nearest waterbody: Mill Creek Cut Off

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Ohio River

Name of watershed or Hydrologic Unit Code (HUC): 05140101 Ohio River

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

Office (Desk) Determination. Date:

Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are no** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: linear feet: width (ft) and/or acres.

Wetlands: acres.

c. Limits (boundaries) of jurisdiction based on: Pick List

Elevation of established OHWM (if known): .

2. Non-regulated waters/wetlands (check if applicable):³

Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.

Explain: **Within the project boundary, 13 wetlands and one open water pond are isolated due to a lack of connection to downstream features.**

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW: _____ .

Summarize rationale supporting determination: _____ .

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is “adjacent”: _____ .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are “relatively permanent waters” (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:

Watershed size: **Pick List**
Drainage area: **Pick List**
Average annual rainfall: _____ inches
Average annual snowfall: _____ inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

- Tributary flows directly into TNW.
- Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.
Project waters are **Pick List** river miles from RPW.
Project waters are **Pick List** aerial (straight) miles from TNW.
Project waters are **Pick List** aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: _____ .

Identify flow route to TNW⁵: _____ .
Tributary stream order, if known: _____ .

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

- Tributary is:** Natural
 Artificial (man-made). Explain: _____
 Manipulated (man-altered). Explain: _____

Tributary properties with respect to top of bank (estimate):

Average width: _____ feet
Average depth: _____ feet
Average side slopes: **Pick List**.

Primary tributary substrate composition (check all that apply):

- | | | |
|--|--|-----------------------------------|
| <input type="checkbox"/> Silts | <input type="checkbox"/> Sands | <input type="checkbox"/> Concrete |
| <input type="checkbox"/> Cobbles | <input type="checkbox"/> Gravel | <input type="checkbox"/> Muck |
| <input type="checkbox"/> Bedrock | <input type="checkbox"/> Vegetation. Type/% cover: _____ | |
| <input type="checkbox"/> Other. Explain: _____ | | |

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: _____

Presence of run/riffle/pool complexes. Explain: _____

Tributary geometry: **Pick List**

Tributary gradient (approximate average slope): _____ %

(c) Flow:

Tributary provides for: **Pick List**

Estimate average number of flow events in review area/year: **Pick List**

Describe flow regime: _____

Other information on duration and volume: _____

Surface flow is: **Pick List**. Characteristics: _____

Subsurface flow: **Pick List**. Explain findings: _____

Dye (or other) test performed: _____

Tributary has (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Bed and banks | |
| <input type="checkbox"/> OHWM ⁶ (check all indicators that apply): | |
| <input type="checkbox"/> clear, natural line impressed on the bank | <input type="checkbox"/> the presence of litter and debris |
| <input type="checkbox"/> changes in the character of soil | <input type="checkbox"/> destruction of terrestrial vegetation |
| <input type="checkbox"/> shelving | <input type="checkbox"/> the presence of wrack line |
| <input type="checkbox"/> vegetation matted down, bent, or absent | <input type="checkbox"/> sediment sorting |
| <input type="checkbox"/> leaf litter disturbed or washed away | <input type="checkbox"/> scour |
| <input type="checkbox"/> sediment deposition | <input type="checkbox"/> multiple observed or predicted flow events |
| <input type="checkbox"/> water staining | <input type="checkbox"/> abrupt change in plant community |
| <input type="checkbox"/> other (list): _____ | |
| <input type="checkbox"/> Discontinuous OHWM. ⁷ Explain: _____ | |

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

- | | |
|--|--|
| <input type="checkbox"/> High Tide Line indicated by: | <input type="checkbox"/> Mean High Water Mark indicated by: |
| <input type="checkbox"/> oil or scum line along shore objects | <input type="checkbox"/> survey to available datum; |
| <input type="checkbox"/> fine shell or debris deposits (foreshore) | <input type="checkbox"/> physical markings; |
| <input type="checkbox"/> physical markings/characteristics | <input type="checkbox"/> vegetation lines/changes in vegetation types. |
| <input type="checkbox"/> tidal gauges | |
| <input type="checkbox"/> other (list): _____ | |

(iii) **Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: _____

Identify specific pollutants, if known: _____

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

(iv) **Biological Characteristics. Channel supports (check all that apply):**

- Riparian corridor. Characteristics (type, average width): .
- Wetland fringe. Characteristics: .
- Habitat for:
 - Federally Listed species. Explain findings: .
 - Fish/spawn areas. Explain findings: .
 - Other environmentally-sensitive species. Explain findings: .
 - Aquatic/wildlife diversity. Explain findings: .

2. **Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain: .

Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**

Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

- Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain: .

Ecological connection. Explain: .

Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

Identify specific pollutants, if known: .

(iii) **Biological Characteristics. Wetland supports (check all that apply):**

- Riparian buffer. Characteristics (type, average width): .
- Vegetation type/percent cover. Explain: .
- Habitat for:
 - Federally Listed species. Explain findings: .
 - Fish/spawn areas. Explain findings: .
 - Other environmentally-sensitive species. Explain findings: .
 - Aquatic/wildlife diversity. Explain findings: .

3. **Characteristics of all wetlands adjacent to the tributary (if any)**

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately () acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N) Size (in acres) Directly abuts? (Y/N) Size (in acres)

Summarize overall biological, chemical and physical functions being performed: .

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
 TNWs: linear feet width (ft), Or, acres.
 Wetlands adjacent to TNWs: acres.
2. **RPWs that flow directly or indirectly into TNWs.**
 Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
 Tributaries of TNW where tributaries have continuous flow “seasonally” (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
 Other non-wetland waters: acres.
Identify type(s) of waters: .

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

- Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: linear feet width (ft).
 Other non-wetland waters: acres.
Identify type(s) of waters: .

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
 Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .
 Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.

- Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters.⁹

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- Demonstrate that impoundment was created from "waters of the U.S.," or
 Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
 Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):¹⁰

- which are or could be used by interstate or foreign travelers for recreational or other purposes.
 from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
 which are or could be used for industrial purposes by industries in interstate commerce.
 Interstate isolated waters. Explain: .
 Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

⁸See Footnote # 3.

⁹To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
- Identify type(s) of waters: .
- Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in “SWANCC,” the review area would have been regulated based solely on the “Migratory Bird Rule” (MBR).
- Waters do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction. Explain: **Open Water 1 and Wetlands 1, 2, 9-16, and 18-20 lack a connection to other surface waters. They are located in defined depressions with no direct connetions or indirect connections through drainages, swales, or overland flow to jurisdictional waters.**
- Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- Lakes/ponds: 0.029 acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: 3.396 acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps: .
- Corps navigable waters’ study: .
- U.S. Geological Survey Hydrologic Atlas: .
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000 – Louisville West, Kentucky Quad.
- USDA Natural Resources Conservation Service Soil Survey. Citation: Soil Survey Geographic Database for Jefferson County, KY (2008).
- National wetlands inventory map(s). Cite name: .
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: FEMA NFHL (2015).
- 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): kygissserver.ky.gov ArcGIS Services (2018).
or Other (Name & Date): Site photographs: January 5, 6, 7, and 11, 2021.
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: .