August 19, 2020

Mr. Ron Stouffer
U.S. Army Corps of Engineers
Northern Virginia Field Office
18139 Triangle Plaza, Suite 213
Dumfries, Virginia 22026

RE: Mountain View Residential Property, Loudoun County, Virginia
Wetland Delineation and Jurisdictional Determination Request

Dear Mr. Stouffer:

Bowman Consulting Group, Ltd. (BCG) is pleased to submit the following Wetland Delineation and Jurisdictional Determination (JD) Request for the above Property on behalf of the Applicants, 43474MountainViewDr LLC and 43500MountainViewDr LLC. On April 22, 2020 and August 5, 2020, BCG conducted field investigations at the Mountain View Residential Property in order to identify those areas that are most likely within the regulatory purview of the U.S. Army Corps of Engineers (USACE) according to the *Corps of Engineers Wetlands Delineation Manual* (1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region* (Version 2.0, April 2012). Based on the results of the field investigation, there are approximately 0.10 acre of palustrine forested (PFO) wetlands and 0.01 acre of palustrine emergent (PEM) wetlands within the Property.

The following lists the general Property information:

Property Name:	Mountain View Residential Property
Location:	Loudoun County
Latitude:	38°54'53" N
Longitude:	77°29'56" W
USGS Quadrangle Map:	Herndon, VA and Arcola, VA
Tributary:	UT to Elklick Run
HUC:	PL45 (Cub Run), 02070010 (Middle Potomac – Anacostia – Occoquan)

The following lists the Applicant and Agent information for the Property:

Applicant:	**Applicant:**	**Agent:**
43474MountainViewDr LLC	43500MountainViewDr LLC	Bowman Consulting Group, Ltd.
Attn: Mr. Sujith Maram	Attn: Mr. Sujith Maram	Attn: Mr. Sean Gagnon
13787 Lowe Street	22843 Angelique Drive	13461 Sunrise Valley Dr., St. 500
Chantilly, Virginia 20151	Ashburn, Virginia 20148	Herndon, Virginia 20171
Phone: 202.763.6528	Phone: 202.763.6528	Phone: 703.464.1000
Email: maramsujith@gmail.com	Email: maramsujith@gmail.com	Email: sgagnon@bowmancg.com

The following Wetland Delineation and Jurisdictional Determination Request Letter details the results of the study, and includes the Wetland Delineation Map, wetland delineation datasheets, representative photographs, and other accompanying exhibits.

Property Description
The approximately 8.35-acre Mountain View Residential Property is identified as PINs 128293895, 128294179, 128396515, and 128399805 and located at 43450, 43474, and 43500 Mountain View Drive in Loudoun County, Virginia. More generally, the Property is located at 38°54'53" N Latitude and 77°29'56" W Longitude on the Herndon, VA and Arcola, VA USGS Quadrangle Maps (see attached).

As shown on the attached Aerial Photograph, the majority of the Property consists of existing residential and commercial structures with associated maintained lawn, surface parking, and forested areas. The Property is bordered by Mountain View Drive to the south and west, residential properties to the east, and forested and residential properties to the north. The Property drains towards an unnamed tributary to Elklick Run, which is located within the Cub Run (PL45) watershed of Hydrologic Unit Code (HUC) 02070010 (Middle Potomac – Anacostia – Occoquan).

Methodology
The *Corps of Engineers Wetlands Delineation Manual* (1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region* (Version 2.0, April 2012) follow a three-parameter approach to identifying wetlands: hydrophytic vegetation, hydric soils, and hydrologic indicators. All three parameters normally must be present for an area to be considered a jurisdictional wetland in accordance with Section 404 of the Clean Water Act. Wetlands are then classified according to the Cowardin System, as described in *Classification of Wetlands and Deepwater Habitats of the United States* (1979).

A preliminary evaluation of the three parameters was performed by BCG prior to the field investigation by examination of existing conditions and topographic mapping, the Herndon, VA and Arcola, VA USGS Quadrangle Maps (see attached), aerial photography (see attached), the U.S. Fish and Wildlife Service National Wetlands Inventory information obtained from the Wetlands Online Mapper and Data Download (*http://www.fws.gov/wetlands/data/Mapper.html*, see attached NWI Map), the *USDA Loudoun County, Virginia Soils Survey* (USDA Natural Resources Conservation Service, Web Soil Survey 3.3, *http://websoilsurvey.nrcs.usda.gov*, Survey Area Data: Version 17, June 4, 2020, see attached Soils Map), and GIS information obtained from the Loudoun County WebLogis Online Mapping System (*https://logis.loudoun.gov/weblogis*, see attached). The reference information was verified by site inspections conducted by BCG on April 22, 2020 and August 5, 2020 to characterize soils, vegetation, and hydrology, and to define the boundaries of waters of the U.S., including wetlands, that may be present within the Property.

Soils
A hydric soil is defined as a "soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part" (Federal Register, July 13, 1994). According to the USACE's Manuals, common hydric soil indicators include low chroma (chroma<2, value>4) matrix, concretions, or listing on local or national hydric soils lists. The National Hydric Soils List for Loudoun County, Virginia, published by the USDA Natural Resources Conservation Service, was reviewed to determine if the mapped soils are classified as

hydric. The *USDA Loudoun County, Virginia Soils Survey* maps the following soil types within the Property (see attached for the Soils Map):

Table 1: Soils Summary Table

Map Unit	Map Unit Name	Drainage Class [1]	National Hydric Soils List [2]	Hydric Component
67B	Jackland and Haymarket soils, 2 to 7 percent slopes	WD	Yes	Waxpool (4%) Elbert (2%)
68B	Jackland and Haymarket soils, 2 to 7 percent slopes, very stony	WD	Yes	Waxpool (4%) Elbert (2%)
69A	Elbert silty clay loam, 0 to 2 percent slopes, frequently flooded	PD	Yes	Elbert (85%) Waxpool (5%)

[1] *PD – Poorly Drained; WD – Well Drained*
[2] *Per National Hydric Soils List for Loudoun County, Virginia published by USDA Natural Resources Conservation Service*

During the field investigation, soil cores were taken to a depth of 12+ inches to describe soil morphological characteristics. Soil characteristics including texture, color (hue, chroma, and value), and odor were inspected for each sample. *Munsell Soil Color Charts* were used for determining the soil color.

Vegetation
Plant species observed on the site were identified and the wetland indicator status for each species was determined from the *Eastern Mountains and Piedmont – 2018 Regional Wetland Plant List* (May 2020). The indicator status of a species indicates the probability that the species will occur in a wetland of the northeast region of the United States, as follows: Obligate Upland (UPL, <1%), Facultative Upland (FACU, 1-33%), Facultative (FAC, 34-66%), Facultative Wet (FACW, 67-99%), and Obligate (OBL, >99%). Normally, more than 50 percent of the dominant species must be FAC or wetter for the hydrophytic vegetation indicator to be considered satisfied.

Hydrology
The USACE's Manuals state that wetland hydrology encompasses all hydrologic characteristics of areas that are periodically inundated or have soils that are saturated to the surface at some time during the growing season. Hydrologic indicators include, but are not limited to, sediment deposits, visual inundation, drift lines, soil erosion, and hummocking. Evidence of these indicators is present even during dry periods, and therefore are useful indicators of a wetland.

Results
Based on the results of the field investigation, there are approximately 0.10 acre of palustrine forested (PFO) wetlands and 0.01 acre of palustrine emergent (PEM) wetlands located within the Property. The enclosed Wetland Delineation Map depicts the location and extent of the flagged waters of the U.S. and wetland boundaries located within the Property, which have been field-located by BCG using a handheld GPS unit capable of sub-meter accuracy. Representative photographs and data point datasheets are also enclosed.

Two roadside ditches are located along Mountain View Drive within the southern portion of the Property (Photo #1) and one roadside ditch is located along Mountain View Drive within the western portion of the Property (Photo #2). No jurisdictional features were identified within these areas. Data Point DP-C1 was collected within a depression in the western portion of PIN 128396515 (Photo #3). This area supports hydrophytic vegetation (silver maple, green ash, and broad-leaf cattail) and exhibits surface water, water-stained leaves, and hydric soils with a depleted matrix. However, it is evident that this area has developed within uplands after construction of an adjacent sanitary sewer. Therefore, this depression should not be considered a jurisdictional feature.

Wetland B, a palustrine forested wetland flagged B1/B2 through B7/B16, and measuring approximately 1,625 square feet (0.04 acre), is located within the western portion of the Property. Data Point DP-B1 was collected within the upper portion of Wetland B near Flags B1/B2 (Photo #4); this area supports hydrophytic vegetation (pin oak, green ash, silver maple, and poison ivy) and exhibits water-stained leaves, drainage patterns, FAC-neutral test, and hydric soils with a depleted matrix. Data Point DP-B2 was collected within the lower portion of Wetland B near Flags B14/B16 (Photo #5); this area supports hydrophytic vegetation (green ash, pin oak, silver maple, and poison ivy) and exhibits water-stained leaves, drainage patterns, FAC-neutral test, and hydric soils with a depleted matrix. Data Point DP-B3 was collected just downslope and outside of Wetland B near Flags B7/B16 (Photo #6); this area supports hydrophytic vegetation (green ash, pin oak, persimmon, and poison ivy) but does not exhibit hydric soils or wetland hydrology. A direct jurisdictional connection to downstream waters was not observed downslope of Wetland B.

Wetland A, a palustrine forested wetland flagged A1/A2 through A12/A19, and measuring approximately 1,787 square feet (0.04 acre) within its upper portion, is located within the northwestern portion of the Property (Photo #7). Data Point DP-A1 was collected within Wetland A near Flags A13/A15 (Photo #8); this area supports hydrophytic vegetation (slippery elm and pin oak) and exhibits a high water table, algal mat or crust, water-stained leaves, drainage patterns, FAC-neutral test, and hydric soils with a depleted matrix. Data Point DP-A2 was collected just upslope and outside of Wetland A near Flags A13/A15 (Photo #9); this area does not exhibit any of the three wetland parameters. Wetland A transitions to a palustrine emergent wetland flagged A12/A19 through A14/A21 and measuring approximately 414 square feet (0.01 acre) within a sanitary sewer easement at Flags A12/A19 (Photo #10). Wetland A transitions back to palustrine forested wetland flagged A14/A21 through Flags A24/A29, measuring approximately 1,154 square feet (0.03 acre) within the Property at Flags A14/A21. Photo #11 provides a representative view of the lower portion of Wetland A near Flags A20/A25. Wetland A continues to the north and outside the limits of investigation at Flags A26/A31 (Photo #12).

The following table summarizes the data points that were collected during the field investigation:

Table 2: Data Point Summary Table

Data Point	Mapped Soil Unit	Hydrophytic Vegetation	Hydric Soils	Wetland Hydrology	Community ID
DP-A1	68B	Yes	Yes	Yes	PFO Wetland
DP-A2	68B	No	No	No	Upland

Data Point	Mapped Soil Unit	Hydrophytic Vegetation	Hydric Soils	Wetland Hydrology	Community ID
DP-B1	69A	Yes	Yes	Yes	PFO Wetland
DP-B2	69A	Yes	Yes	Yes	PFO Wetland
DP-B3	69A	Yes	No	No	Upland
DP-C1	69A	Yes	Yes	Yes	Upland Depression

The following table summarizes the waters of the U.S. and wetlands identified within the Property:

Table 3: Waters of the U.S. and Wetlands Summary Table[1]

Classification[2]	Length (LF)	Area (SF)	Area (Ac)
Palustrine Forested (PFO) Wetland	N/A	4,566	0.10
Palustrine Emergent (PEM) Wetland	N/A	414	0.01
Total Waters of the U.S.	**N/A**	**4,980**	**0.11**

[1]*The amount of waters of the U.S. and wetlands indicated in the table reflects the amount located within the Property.*
[2]*Wetland classifications are based on preliminary assessments conducted by BCG on April 22, 2020 and August 5, 2020.*

Based on the results of this field investigation, there are approximately 0.10 acre of palustrine forested (PFO) wetlands and 0.01 acre of palustrine emergent (PEM) wetlands located within the Property, as shown on the enclosed Wetland Delineation Map. The results of this wetland delineation study should be considered preliminary until they have been approved by the USACE during a JD site visit; a copy of the signed Pre-Application and/or Jurisdictional Waters Determination Request Form is attached.

We would like to schedule a JD site visit with you to review and confirm the boundaries of jurisdictional waters of the U.S. at the Property; please feel free to contact me at your earliest convenience to coordinate a date and time. If you have any questions concerning the Property or require additional information, please feel free to contact me at 703.464.1000 or sgagnon@bowmancg.com.

Sincerely,
BOWMAN CONSULTING GROUP, LTD

Sean Gagnon, PWD, ISA-CA
Environmental Project Manager
Enclosures

cc: Sujith Maram, 43474MountainViewDr LLC and 43500MountainViewDr LLC

Scale: 1"=2000'

Source: USGS (2019)

Bowman CONSULTING

USGS Quadrangle Map

Mountain View Residential Property

38°54'53" N, 77°29'56" W, Herndon, VA and Arcola, VA USGS Quadrangle Maps
PL45 (Cub Run), HUC 02070010 (Middle Potomac-Anacostia-Occoquan)
Loudoun County, Virginia

Bowman Consulting Group, Ltd.
13461 Sunrise Valley Place Suite 500
Herndon, Virginia 20171

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www.bowmanconsulting.com

Prepared for:

43474MountainViewDr LLC
13787 Lowe Street
Chantilly, Virginia 20151

43500MountainViewDr LLC
22843 Angelique Drive
Ashburn, Virginia 20148

Scale: 1"=150'

Source: ArcMap (2019)

Bowman CONSULTING

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Aerial Photograph

Mountain View Residential Property

38°54'53" N, 77°29'56" W, Herndon, VA and Arcola, VA USGS Quadrangle Maps
PL45 (Cub Run), HUC 02070010 (Middle Potomac-Anacostia-Occoquan)
Loudoun County, Virginia

Prepared for:

43474MountainViewDr LLC
13787 Lowe Street
Chantilly, Virginia 20151

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22843 Angelique Drive
Ashburn, Virginia 20148

U.S. Fish and Wildlife Service
National Wetlands Inventory

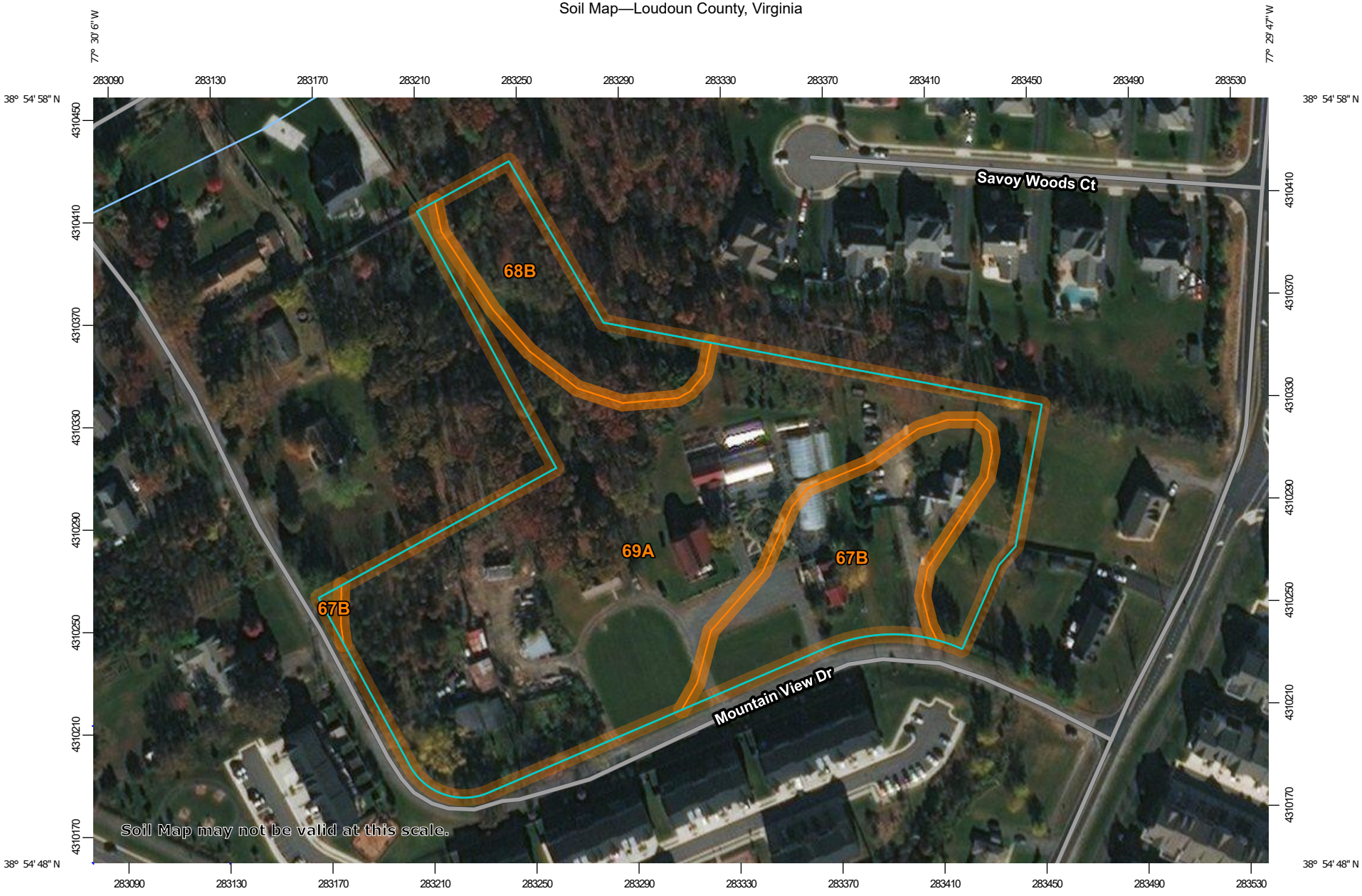
Mountain View Residential Property

August 4, 2020

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



Map Scale: 1:2,110 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Loudoun County, Virginia
Survey Area Data: Version 17, Jun 4, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 25, 2014—Mar 10, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
67B	Jackland and Haymarket soils, 2 to 7 percent slopes	1.5	18.1%
68B	Jackland and Haymarket soils, 2 to 7 percent slopes, very stony	1.0	11.7%
69A	Elbert silty clay loam, 0 to 2 percent slopes, frequently flooded	5.9	70.1%
Totals for Area of Interest		**8.4**	**100.0%**

Hydric Soils–Loudoun County, Virginia				
Map symbol and map unit name	**Component**	**Percent of map unit**	**Landform**	**Hydric criteria**
67B—Jackland and Haymarket soils, 2 to 7 percent slopes				
	Waxpool, occasionally ponded	4	Interfluves	2
	Elbert	2	Drainageways	2, 3
68B—Jackland and Haymarket soils, 2 to 7 percent slopes, very stony				
	Waxpool, occasionally ponded	4	Interfluves	2
	Elbert	2	Drainageways	2, 3
69A—Elbert silty clay loam, 0 to 2 percent slopes, frequently flooded				
	Elbert	85	Drainageways	2, 3
	Waxpool, occasionally ponded	5	Interfluves	2

Data Source Information

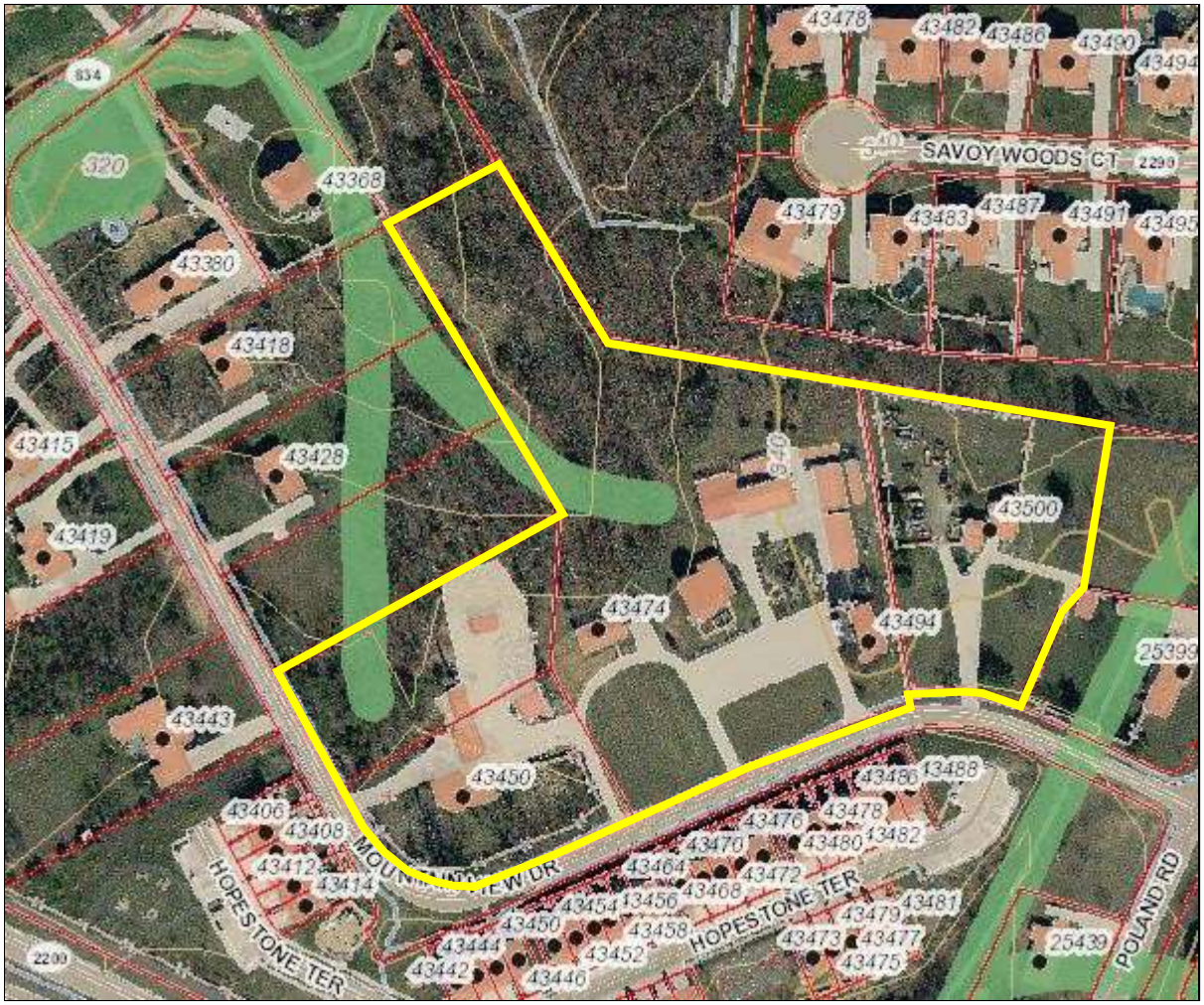
Soil Survey Area: Loudoun County, Virginia
Survey Area Data: Version 17, Jun 4, 2020

Wednesday, August 5, 2020

Loudoun County, Virginia

www.loudoun.gov

(map not to scale)



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Mountain View Residential Property City/County: Loudoun County Sampling Date: April 22, 2020

Applicant/Owner: 43474MountainViewDr LLC and 43500MountainViewDr LLC State: VA Sampling Point: DP-A1

Investigator(s): S. Gagnon & B. Noveno Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): drainage feature Local relief (concave, convex, none): concave Slope (%): 3%

Subregion (LRR or MLRA): MLRA 148 Lat: 7017929.4183 Long: 11767497.3986 Datum: NAD83

Soil Map Unit Name: 68B - Jackland and Haymarket soils, 2 to 7 percent slopes, very stony NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes X** **No _____**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	

Remarks:

Data Point DP-A1 was collected within Wetland A near Flags A13/A15.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- X Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches): _____
Water Table Present?	Yes X	No _____	Depth (inches): 7 inches
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches): _____

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP-A1

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus rubra*	30	Yes	FAC
2. *Quercus palustris*	10	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
	40	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30 feet)			
1. *Quercus palustris*	10	Yes	FACW
2. *Viburnum prunifolium*	5	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	15	= Total Cover	
Herb Stratum (Plot size: 15 feet)			
1. *Carex sp.*	5	Yes	N/A
2. *Toxicodendron radicans*	1	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	6	= Total Cover	
Woody Vine Stratum (Plot size: 30 feet)			
1. *Toxicodendron radicans*	2	No	FAC
2.			
3.			
4.			
5.			
6.			
	2	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	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[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL

Sampling Point: DP-A1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 12+	2.5Y 4/1	80	10YR 4/6	20	C	PL	silt loam	

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- X 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)**

Indicators for Problematic Hydric Soils[3]:

- ___ 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)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** X **No** ___

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Mountain View Residential Property City/County: Loudoun County Sampling Date: April 22, 2020

Applicant/Owner: 43474MountainViewDr LLC and 43500MountainViewDr LLC State: VA Sampling Point: DP-A2

Investigator(s): S. Gagnon & B. Noveno Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): upland Local relief (concave, convex, none): none Slope (%): 3%

Subregion (LRR or MLRA): MLRA 148 Lat: 7017938.6959 Long: 11767518.8543 Datum: NAD83

Soil Map Unit Name: 68B - Jackland and Haymarket soils, 2 to 7 percent slopes, very stony NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks:

Data Point DP-A2 was collected just outside and upslope of Wetland A near Flags A13/A15.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches): _____
Water Table Present?	Yes _____	No X	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP-A2

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus alba*	30	Yes	FACU
2. *Ulmus rubra*	30	Yes	FAC
3. *Prunus serotina*	10	No	FACU
4.			
5.			
6.			
7.			
8.			
	70	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30 feet)			
1. *Viburnum prunifolium*	10	Yes	FACU
2. *Ulmus rubra*	10	Yes	FAC
3. *Carya glabra*	2	No	FACU
4. *Diospyros virginiana*	2	No	FAC
5. *Quercus rubra*	2	No	FACU
6.			
7.			
8.			
9.			
10.			
	26	= Total Cover	
Herb Stratum (Plot size: 15 feet)			
1. *Rubus pensilvanicus*	5	Yes	FAC
2. *Lonicera japonica*	5	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	10	= Total Cover	
Woody Vine Stratum (Plot size: 30 feet)			
1. *Lonicera japonica*	5	Yes	FACU
2. *Toxicodendron radicans*	5	Yes	FAC
3.			
4.			
5.			
6.			
	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: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
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[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

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

SOIL

Sampling Point: DP-A2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 8	7.5YR 4/4	100					clay loam	
8 - 12+	10YR 5/8	100					clay	

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox 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)**

Indicators for Problematic Hydric Soils[3]:

- ___ 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)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Mountain View Residential Property City/County: Loudoun County Sampling Date: August 5, 2020

Applicant/Owner: 43474MountainViewDr LLC and 43500MountainViewDr LLC State: VA Sampling Point: DP-B1

Investigator(s): B. Noveno & O. Stelzig Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 2%

Subregion (LRR or MLRA): MLRA 148 Lat: 7017566.7843 Long: 11767326.4096 Datum: NAD83

Soil Map Unit Name: 69A - Elbert silty clay loam, 0 to 2 percent slopes, frequently flooded NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

Data Point DP-B1 was collected within the upper portion of Wetland B near Flags B1/B2.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches): _____
Water Table Present?	Yes _____	No X	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches): _____

Wetland Hydrology Present? Yes X 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: DP-B1

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus palustris*	25	Yes	FACW
2. *Fraxinus pennsylvanica*	10	Yes	FACW
3. *Acer saccharinum*	10	Yes	FACW
4.			
5.			
6.			
7.			
8.			
	45	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30 feet)			
1. *Fraxinus pennsylvanica*	20	Yes	FACW
2. *Acer saccharinum*	15	Yes	FACW
3. *Quercus palustris*	15	Yes	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	50	= Total Cover	

Herb Stratum (Plot size: 15 feet)			
1. *Toxicodendron radicans*	20	Yes	FAC
2. *Lonicera japonica*	15	Yes	FACU
3. *Fraxinus pennsylvanica*	10	No	FACW
4. *Grass sp.*	10	No	N/A
5. *Rubus flagellaris*	5	No	FACU
6. *Juncus effusus*	5	No	FACW
7. *Quercus palustris*	1	No	FACW
8. *Parthenocissus quinquefolia*	1	No	FACU
9.			
10.			
11.			
12.			
	67	= Total Cover	

Woody Vine Stratum (Plot size: 30 feet)			
1. *Lonicera japonica*	5	Yes	FACU
2. *Toxicodendron radicans*	5	Yes	FAC
3.			
4.			
5.			
6.			
	10	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 10 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
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[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL

Sampling Point: DP-B1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 2	7.5YR 3/2	100					silt loam	
2 - 12+	10YR 6/1	78	10YR 4/4	20	C	PL	silt loam	
			10YR 4/2	2	C	PL		

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- X 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)**

Indicators for Problematic Hydric Soils[3]:

- ___ 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)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** X **No** ___

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Mountain View Residential Property City/County: Loudoun County Sampling Date: August 5, 2020

Applicant/Owner: 43474MountainViewDr LLC and 43500MountainViewDr LLC State: VA Sampling Point: DP-B2

Investigator(s): B. Noveno & O. Stelzig Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 2%

Subregion (LRR or MLRA): MLRA 148 Lat: 7017610.5822 Long: 11767287.3703 Datum: NAD83

Soil Map Unit Name: 69A - Elbert silty clay loam, 0 to 2 percent slopes, frequently flooded NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

Data Point DP-B2 was collected within the lower portion of Wetland B near Flags B14/B16.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes X 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: DP-B2

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	35	Yes	FACW
2. *Quercus palustris*	15	Yes	FACW
3. *Diospyros virginiana*	5	No	FAC
4.			
5.			
6.			
7.			
8.			
	55	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30 feet)			
1. *Fraxinus pennsylvanica*	10	Yes	FACW
2. *Acer saccharinum*	5	Yes	FACW
3. *Quercus palustris*	5	Yes	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	20	= Total Cover	
Herb Stratum (Plot size: 15 feet)			
1. *Toxicodendron radicans*	15	Yes	FAC
2. *Juncus effusus*	5	Yes	FACW
3. *Rubus pensilvanicus*	2	No	FAC
4. *Lonicera japonica*	1	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	23	= Total Cover	
Woody Vine Stratum (Plot size: 30 feet)			
1. *Toxicodendron radicans*	15	Yes	FAC
2.			
3.			
4.			
5.			
6.			
	15	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
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[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL

Sampling Point: DP-B2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 3	10YR 4/3	98	10YR 4/4	2	C	PL	silt loam	
3 - 9	10YR 6/2	95	10YR 4/4	5	C	PL	silt loam	
9 - 12+	10YR 6/1	80	10YR 5/4	20	C	PL	silt loam	

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- X 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)**

Indicators for Problematic Hydric Soils[3]:

- ___ 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)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** X **No** ___

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Mountain View Residential Property City/County: Loudoun County Sampling Date: August 5, 2020

Applicant/Owner: 43474MountainViewDr LLC and 43500MountainViewDr LLC State: VA Sampling Point: DP-B3

Investigator(s): B. Noveno & O. Stelzig Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): upland Local relief (concave, convex, none): none Slope (%): 1%

Subregion (LRR or MLRA): MLRA 148 Lat: 7017629.6950 Long: 11767293.5603 Datum: NAD83

Soil Map Unit Name: 69A - Elbert silty clay loam, 0 to 2 percent slopes, frequently flooded NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks:

Data Point DP-B3 was collected just downslope and outside of Wetland B near Flags B7/B16.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches): _____
Water Table Present?	Yes _____	No X	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches): _____

Wetland Hydrology Present? **Yes** _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP-B3

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	20	Yes	FACW
2. *Quercus palustris*	15	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
	35	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30 feet)			
1. *Diospyros virginiana*	15	Yes	FAC
2. *Viburnum prunifolium*	10	Yes	FACU
3. *Quercus palustris*	10	Yes	FACW
4. *Fraxinus pennsylvanica*	10	Yes	FACW
5. *Juniperus virginiana*	5	No	FACU
6.			
7.			
8.			
9.			
10.			
	50	= Total Cover	
Herb Stratum (Plot size: 15 feet)			
1. *Toxicodendron radicans*	20	Yes	FAC
2. *Parthenocissus quinquefolia*	10	Yes	FACU
3. *Lonicera japonica*	10	Yes	FACU
4. *Erechtites hieraciifolius*	2	No	UPL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	42	= Total Cover	
Woody Vine Stratum (Plot size: 30 feet)			
1. *Lonicera japonica*	5	Yes	FACU
2. *Toxicodendron radicans*	5	Yes	FAC
3.			
4.			
5.			
6.			
	10	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 11 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 63% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
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[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No ___

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

SOIL

Sampling Point: DP-B3

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 2	10YR 3/2	100					silt loam	
2 - 12+	10YR 5/3	95	10YR 4/4	5	C	PL	silt loam	

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox 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)**

Indicators for Problematic Hydric Soils[3]:

- ___ 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)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes ____ **No** X

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Mountain View Residential Property City/County: Loudoun County Sampling Date: August 5, 2020

Applicant/Owner: 43474MountainViewDr LLC and 43500MountainViewDr LLC State: VA Sampling Point: DP-C1

Investigator(s): B. Noveno & O. Stelzig Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 2%

Subregion (LRR or MLRA): MLRA 148 Lat: 7017596.0780 Long: 11767503.0831 Datum: NAD83

Soil Map Unit Name: 69A - Elbert silty clay loam, 0 to 2 percent slopes, frequently flooded NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

Data Point DP-C1 was collected within a depression in the western portion of PIN 128396515. It is evident that this area has developed within uplands after construction of an adjacent sanitary sewer. Therefore, this depression should not be considered a jurisdictional feature.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No _____ Depth (inches): < 1 inch

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology disturbed by sewer installation.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: DP-C1

Tree Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	15	Yes	FACW
2. *Fraxinus pennsylvanica*	10	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
	25	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30 feet)			
1. *Acer saccharinum*	5	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	5	= Total Cover	
Herb Stratum (Plot size: 15 feet)			
1. *Typha latifolia*	35	Yes	OBL
2. *Eupatorium serotinum*	25	Yes	FAC
3. *Lonicera japonica*	10	No	FACU
4. *Persicaria maculosa*	10	No	FACW
5. *Scirpus cyperinus*	10	No	FACW
6. *Festuca arundinacea*	2	No	UPL
7. *Toxicodendron radicans*	1	No	FAC
8.			
9.			
10.			
11.			
12.			
	93	= Total Cover	
Woody Vine Stratum (Plot size: 30 feet)			
1. *Lonicera japonica*	3	No	FAC
2.			
3.			
4.			
5.			
6.			
	3	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	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[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

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

SOIL

Sampling Point: DP-C1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 7	10YR 4/2	95	10YR 3/4	5	C	PL	silt loam	
7 - 12+	10YR 5/2	80	10YR 6/4	20	C	PL	silt loam	

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- X 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)**

Indicators for Problematic Hydric Soils[3]:

- ___ 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)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Soils disturbed by sewer installation

Photo #1: View to the southeast of a roadside ditch along Mountain View Drive in the southern portion of the Property; no jurisdictional features were identified within this area (April 22, 2020, by B. Noveno, BCG).

Photo #2: View to the northwest of a roadside drainage ditch along Mountain View Drive within the western portion of the Property; no jurisdictional features were identified within this area (August 5, 2020, by B. Noveno, BCG).

Photo #3: View to the northwest of Data Point DP-C1, which was collected within a depression in the western portion of PIN 128396515; this area exhibits all three wetland parameters. However, it is evident that it has developed within a recently disturbed area associated with the recently constructed adjacent sanitary sewer (August 5, 2020, by B. Noveno, BCG).

Photo #4: View to the northwest of Data Point DP-B1, which was collected within the upper portion of Wetland B near Flags B1/B2 (August 5, 2020, by B. Noveno, BCG).

Photo #5: View to the southeast of Data Point DP-B2, which was collected within the lower portion of Wetland B near Flags B14/B16 (August 5, 2020, by B. Noveno, BCG).

Photo #6: View to the northwest of Data Point DP-B3, which was collected just downslope and outside of Wetland B near Flags B7/B16; this area supports hydrophytic vegetation but does not exhibit hydric soils or wetland hydrology (August 5, 2020, by B. Noveno, BCG).

Photo #7: Downslope view of Wetland A from its origin at Flags A1/A2 (April 22, 2020, by B. Noveno, BCG).

Photo #8: View to the northwest of Data Point DP-A1, which was collected within the upper portion of Wetland A near Flags A13/A15 (April 22, 2020, by B. Noveno, BCG).

Photo #9: View to the east of Data Point DP-A2, which was collected just upslope and outside of Wetland A near Flags A13/A15; this area does not exhibit any of the three wetland parameters (April 22, 2020, by B. Noveno, BCG).

Photo #10: Downslope view of Wetland A from near Flags A12/A19, where it transitions to palustrine emergent wetland (April 22, 2020, by B. Noveno, BCG).

Photo #11: Upslope view within the lower portion of Wetland A from Flags A20/A25 (April 22, 2020, by B. Noveno, BCG).

Photo #12: Downslope view of Wetland A from Flags A26/A31, where Wetland A continues to the north and outside the limits of investigation (April 22, 2020, by B. Noveno, BCG).