

> PREPARED FOR: State Street Group 1902 Wedgewood Avenue 2nd Floor Nashville, Tennessee 37212

> PREPARED BY: S&ME, Inc. 6515 Nightingale Lane Knoxville, Tennessee 37909

> > March 2, 2022



March 2, 2022

Tennessee Department of Environment Nashville Environmental Field Office 711 R.S. Gass Boulevard Nashville, Tennessee 37216 Attention: Mr. Bill Murph U.S. Army Corps of Engineers Nashville Regulatory District, West Branch 3701 Bell Road Nashville, Tennessee 37214 Attention: Mr. Tim Wilder

Reference: Jurisdictional Waters Report Brandywine Farm Spring Hill, Williamson County, Tennessee S&ME Project No. 218947

Dear Tim and Tim,

S&ME, Inc. (S&ME) is submitting this report to present the results of the jurisdictional waters evaluation completed by S&ME in October 2021 on approximately 74 acres of land located at 3706 John Lunn Road in Spring Hill, Williamson County, Tennessee. State Street Group proposes an industrial development at the site and contracted S&ME to delineate potential jurisdictional waters at the site to determine permitting requirements. The following report details the wetland and stream delineation performed by S&ME and includes background information, methodology, observed waters of the U.S. (WOTUS) and waters of the state (WOTS), and relevant figures and photographs.

S&ME is providing this Jurisdictional Waters Report for your review and requests U.S. Army Corps of Engineers (USACE) and Tennessee Department of Environment and Conservation (TDEC) verification of the WOUS and WOTS at the site. We will contact you to schedule a site visit, if required. In the meantime, if you have any questions regarding this report, please feel free to contact us.

Sincerely,

S&ME, Inc.

Sarah A. Rowe, PWS, QHP Project Biologist

Elizabet m. Parter

Elizabeth Porter, PG, PMP Technical Principal



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1.0 **Project Description**

The project site is comprised of an approximately 74-acre property located at 3706 John Lunn Road in Spring Hill, Williamson County, Tennessee. The site is being evaluated for industrial development and consists of one undeveloped parcel identified on Tennessee Property Viewer database as Parcel 043 006.00. The site is currently undeveloped and consists of pasture, open fields, and forest, and the site currently operates as a small family farming operation.

S&ME has been contracted by State Street Group to obtain a Jurisdictional Determination (JD) from the U.S. Army Corps of Engineers (USACE) regarding waters of the U.S. (WOTUS) and the Tennessee Department of Environment and Conservation (TDEC) regarding waters of the state (WOTS) to determine permitting requirements in regard to Sections 401 and 404 of the Clean Water Act (CWA) of 1972. The following report details the potentially jurisdictional waters observed on the site by S&ME in October 2021.

2.0 Methodology

Jurisdictional WOTUS, including wetlands and ephemeral streams, are defined by 33 CFR Part 328.3 and are protected by Section 404 of the Clean Water Act (33 USC 1344), which is administered and enforced by the USACE. The TDEC Division of Water Resources (DWR) has jurisdiction over WOTS. The wetland assessment was performed using the Routine On-Site Determination Method as defined in the Corps of Engineers *1987 Wetlands Delineation Manual* and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region.* This technique uses a multi-parameter approach, which requires positive evidence of three criteria: hydrophytic vegetation, hydric soils, and wetland hydrology. Areas exhibiting all three wetland characteristics, as well as surface waters, are considered jurisdictional. Drainage features were evaluated in accordance with the TDEC Guidance for Making Hydrologic Determinations (HDs), Version 1.5 by a Tennessee Qualified Hydrologic Professional (QHP). The procedures outlined in this guidance are intended to be applied to drainage features that could be considered either a wet-weather conveyance (WWC) or a stream.

Our assessment for the possible occurrence of jurisdictional waters within the site consisted of using a combination of in-house research and field reconnaissance. Subsequent to the in-house review, jurisdictional WOTUS and WOTS were assessed in the field employing the methodologies referenced above.

3.0 Literature and Database Review

Prior to our site visit, S&ME performed a literature review of the subject property to determine potential areas of concern to be evaluated while in the field. This included a review of the U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle map, the TDEC 303(d) draft list and stream database viewer, U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) maps, historic aerial photographs, and the Natural Resources Conservation Service (NRCS) soil survey database.

The property is located on a portion of USGS quadrangle map for Carters Creek, Tennessee (Figure 1, Appendix I), and the latitude and longitude near the center of the site are 35.723361°N, 86.913739°W. According to the USGS

topographic map and National Wetlands Inventory (NWI) maps (Figure 2, Appendix I), one blue-line stream (an unnamed tributary) bisects the property and flows from a freshwater pond near the northwestern site corner to the south, converging with Aenon Creek, which flows along the southern site boundary. The TDEC stream database only shows Aenon Creek located along the southern boundary; this stream segment is shown as having not been assessed by TDEC to determine if the waters support designated uses. The site drains to the Rutherford Creek Upper 12-digit Hydrologic Unit Code (HUC) 060400030201 watershed and the Lower Duck River 8-digit HUC (06040003); it is also located within the 71i (Inner Nashville Basin) ecoregion.

The NRCS soil survey data for Maury County, Tennessee was also reviewed for the presence of hydric soils on the site which may indicate wetland conditions due to poorly drained soil substrates. According to the NRCS soils map (Figure 3, Appendix I), the site is comprised of 11 soil types: Captina silt Ioam (Ca), Emory silt Ioam (Em), Gullied land (Gd), Hagerstown silt Ioam (Ha), Hermitage silt Ioam (He), Lindside silt Ioam (Ld), Pickaway silt Ioam (Pc), Gladeville-rock outcrop complex (Rb), Rockland, Talbott material (Rf), Talbott silty clay Ioam (Ta), and Talbott silty clay (Tb).

According to the NRCS data, ponding of the soils onsite is not probable, and the chance of ponding is nearly zero percent in any year. The average depth to groundwater in most of the mapped soils is greater than two feet deep, except for areas mapped Ca, Lb, and Lc, which have a depth to groundwater of 20, 23, and 15 inches, respectively. Therefore, these three soil types are more likely to have an elevated saturated zone in the soil, which may cause wetland conditions.

With the exception of low-lying areas on the western and southern portions of the site (comprised of Lb, Eb, and Lc soils), flooding at the site is not probable (i.e., the chance of flooding is nearly zero percent in any year and occurs less than one in 500 years). Flooding is rare in Lb and Eb soils, meaning that flooding is unlikely but possible under unusual weather conditions; the chance of flooding is one to five percent in any year. Flooding is frequent in Lc soils along the Aenon Creek floodplain, meaning that flooding is likely to occur often under normal weather conditions; the chance of flooding is more than 50 percent in any year. But is less than 50 percent in all months in any year. This area is also included as a mapped floodway by the Federal Emergency Management Agency (FEMA) (Figure 2, Appendix I).

4.0 Field Review

S&ME personnel visited the site in October 2021 to locate and delineate WOTUS and WOTS within the assessment area, including streams (perennial, intermittent, or ephemeral), wetlands, ponds, or other surface water features. The site visit was conducted on October 12, 2021, six days following a significant rain event of 0.17 inches on October 7, 2021 (documented by the Weather Underground weather station KTNSPRIN164, Appendix II). According to the USACE Antecedent Precipitation Tool (APT) data (also attached in Appendix II), S&ME determined that the rainfall conditions within the evaluation period (i.e., the prior three months) has been slightly wetter than normal.

The site is bordered to the north, east, and west by agricultural properties and to the south by a golf course that is separated from the site by Aenon Creek. A small industrial complex is located near the northwestern corner of the site and additional industrial properties are located further northwest near Highway 396. The site is in relatively flat to gently-sloping terrain with elevations ranging from approximately 650 feet to 710 feet above sea level, with



the higher elevations located near the northern quarter of the site. The lowest elevations are located to the south, within the Aenon Creek FEMA mapped floodway (Figure 2, Appendix I).

The majority of the site consists of open pasture that is routinely mowed and grazed by cattle. Forested fencelines transect the site, and a small area of scrub-shrub cedar forest is present on the northeastern corner. Common tree species at the site include eastern red cedar (*Juniperus virginiana*), hackberry (*Celtis laevigata*), sycamore (*Platanus occidentalis*), Osage orange (*Maclura pomifera*), persimmon (*Diospyros virginiana*), Chinquapin oak (*Quercus muehlenbergii*), American elm (*Ulmus americana*). Shrubs include privet (*Ligustrum sinense*), honeysuckle (*Lonicera maackii*), multiflora rose (*Rosa multiflora*), and coral berry (*Symphoricarpos orbiculatus*), and herbaceous species include fescue (*Festuca* sp.), clover (*Trifolium* spp.), foxtail (*Setaria viridis*), aster (*Asteraceae* spp.), and broomsedge (*Andropogon virginicus*). No glades or barren habitats are present within the site.

During S&ME's site visit, one intermittent stream (S1), one ephemeral stream/WWC (S2E), and two wetlands (WA, WB) were observed within the project limits (refer to Table 1 below). An additional perennial stream, Aenon Creek, borders the site to the south but is not included in the project area and will not be affected by development. Locations of the potentially jurisdictional waters are shown in the attached Potential Jurisdictional Waters map (Figure 4); representative photographs of the features (Figure 6) and their locations on an aerial photograph (Figure 5) are also attached (Appendix I).

ID	Classification TDEC/USACE (Pending Verification)	TDEC HD (Secondary Score)	Length / Acreage
S1	Intermittent Stream	22.0	3,015 feet
S2E	Ephemeral Stream / WWC	12.0	602 feet
WA	Palustrine emergent (PEM) wetland	n/a	0.05 acres
WB	Palustrine emergent (PEM) wetland	n/a	0.09 acres

Table 1 – Potentially Jurisdictional Waters at the Site

Drainage Feature Assessment

Two S&ME QHPs performed an evaluation of the site to identify and characterize drainage features that may require permitting. Drainage features observed onsite were assessed using the TDEC Guidance, which provides a score for each stream's geomorphic, hydrologic, and biological characteristics. Drainages scoring 19 or above on the secondary indicator data form, or those with primary indicators, are considered streams by TDEC (i.e., WOTS). Drainage features scoring less than 19 are considered to be WWCs by TDEC and can be considered ephemeral streams by the USACE, if an ordinary high-water mark (OHWM) is present. Ephemeral streams are considered WOTUS according to current regulatory guidance and fall within Section 404 regulations. The individual stream descriptions are discussed below, and their corresponding scores can be found on the completed TDEC HD Field Data Sheets in Appendix II.

S1 is an intermittent stream that originates at a limestone outcrop near the northern end of the site and continues south until converging with Aenon Creek. S1 ranges from one to ten feet wide, has a substrate of bedrock, cobble, and silt, and a narrow riparian buffer on the northern half of the site where it is grazed and impacted by cattle use. Stream flow is variable as it continues south, with much of the southern reach observed to be dry during the site



visit. The stream develops a well-forested buffer to the south as it approaches Aenon Creek; at this point the stream also meanders through a more natural alignment within the floodplain.

S2E is an ephemeral stream/WWC that consists of a rarely-flowing headwater drainage with a silt/gravel substrate that drains to the intermittent tributary to Aenon Creek. The channel is poorly defined and is dominated by upland vegetation in many areas. S2E has a narrow, forested buffer surrounded by frequently mowed and grazed pasture.

Wetland Assessment and Delineation

An S&ME professional wetland scientist (PWS) and an S&ME staff scientist performed a field review of the site, investigating low-lying areas that may have the potential for extended periods of saturation/inundation, areas mapped by the NRCS soil survey as possessing hydric or partially-hydric soils or other suspect areas (i.e., flooding, ponding, shallow depth to groundwater), as well as areas shown on the NWI map as either streams or wetlands. Two wetlands (WA and WB) were observed within the site.

Wetlands WA and WB are both palustrine emergent (PEM) features that abut S1 near the northern end of the site and are located in grazed cattle pasture. Both wetlands obtain their hydrology from groundwater seeps, a shallow water table over bedrock, overland flow from S1, and stormwater input from the surrounding slopes. Dominant vegetation includes sedges (*Carex* sp.), ladythumb (*Polygonum persicaria*), mountain mint (*Mentha arvensis*), and mistflower (*Conoclinium coelestinum*). Detailed descriptions of the wetlands and the associated upland data points can be found in Appendix II on the USACE Wetland Determination Data Sheets (WA, UpA, WB, UpB).

5.0 Conclusion

S&ME performed a pedestrian review of the project area in October 2021 and identified one intermittent stream, one, ephemeral stream/WWC, and two wetlands at the site. Since streams and wetlands such as those observed onsite can be considered jurisdictional by the USACE and/or TDEC, impacts to these WOTUS and/or WOTS (e.g., piping, dredging, fill, or relocations) require permits from both regulatory agencies. S&ME requests a Preliminary Jurisdictional Determination (JD) from the USACE and an HD from TDEC to assist with site planning activities and to determine permitting requirements. S&ME appreciates your assistance with this request. If you have any questions regarding this report, please call or email Sarah Rowe ((865)970-0003, srowe@smeinc.com).

6.0 References

Environmental Systems Research Institute, Inc. 2021. ArcGIS Online [web application]. https://smeinc.maps.arcgis.com/home/index.html. (Accessed December 1, 2021.)

Knoxville Geographic Information Systems. 2021. KGIS Maps [web application]. <u>https://www.kgis.org/kgismaps/map.htm</u>. (Accessed: December 1, 2021.).

Tennessee Department of Environment and Conservation, Division of Water Resources. 2021. Public Data Viewer [web application]. <u>https://tdeconline.tn.gov/dwr/</u>. (Accessed: December 1, 2021.)

United States Army Corps of Engineers. 1987. Corps of Engineers Wetlands Delineation Manual. Environmental Laboratory, Waterways Experiment Station, Wetlands Research Program Technical Report Y-87-1. Vicksburg, MS.

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United States Department of Agriculture, Natural Resources Conservation Service. 2021. Plants Database [web application]. <u>https://plants.sc.egov.usda.gov/home</u>. (Accessed: December 6, 2021.)

United States Department of Agriculture, Natural Resources Conservation Service. 2021. Web Soil Survey [web application]. <u>http://websoilsurvey.nrcs.usda.gov/</u>. (Accessed: December 6, 2021.)

United States Fish and Wildlife Service. 2021. National Wetlands Inventory [web application]. <u>https://www.fws.gov/wetlands/data/mapper.html</u>. (Accessed December 1, 2021.)

Appendices

Appendix I - Figures



SpringHill_Brandywine_DCI\FIG1_USGS.mxd plotted by Srowe 10-07-202 Knoxville North\ GIS PROJECTS\2021 Projects\218947 Drawing Path: R:\GISRef\



























































Appendix II - Data Forms



Tennessee Department of Environment and Conservation - Division of Water Resources

312 Rosa L. Parks Ave. 11th Floor. Nashville, TN 37243

Hydrologic Determination Field Data Sheet

Tennessee Division of Water Resources, Version 1.5 (Fillable Form)

Named Waterbody: UNT to Aenon Creek - S1		Date/Time: 10/12/21
Assessors/Affiliation: S&ME, Inc. (J. Rowe 1103-TN12, S. ROWE 1012-	-TN11)	Project ID :
Site Name/Description: Brandywine Farm		218947
Site Location: Headwaters of central drainage feature		
HUC (12 digit):	Latitude: 35.725	5669
Previous Rainfall (7-days) : 1.2 inches (1.1 on 10/5, 0.1 on 10/6)		3078
Precipitation this Season vs. Normal : Source of recent & seasonal precip. data : Anteced	lent Precipitation Tool	
Watershed Size : 0.04 square miles	County: Maury	
Soil Type(s) / Geology : Captina silt loam, eroded gently sloping phosphatic phase / limestone/karst	Source: USDA	/ USGS
Surrounding Land Use : Agriculture, residential		
Degree of historical alteration to natural channel morphology & hvdrolog	gy (select one & des	cribe fully in Notes) :

Primary Field Indicators Observed

Primary Indicators	NO	YES
1. Hydrologic feature exists solely due to a process discharge	\checkmark	WWC
2. Defined bed and bank absent, vegetation composed of upland and FACU species	\checkmark	WWC
3. Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions		WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	\checkmark	WWC
 Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase 	\checkmark	Stream
6. Presence of fish (except Gambusia)	\checkmark	Stream
7. Presence of naturally occurring ground water table connection		Stream
8. Flowing water in channel and 7 days since last precip >0.1" in local watershed		Stream
9. Evidence watercourse has been used as a supply of drinking water	\checkmark	Stream

NOTE: If any Primary Indicators 1-9 = "Yes", then no further investigation is necessary. However, assessors may choose to score secondary indicators as supporting evidence.

In the absence of a primary indicator, or other definitive evidence, complete the secondary indicator table on page 2 of this sheet, and provide score below.

Guidance for the interpretation and scoring of both the primary & secondary indicators is provided in TDEC-DWR Guidance For Making Hydrologic Determinations, Version 1.5

Overall Hydrologic Determination = STREAM

Secondary Indicator Score (if applicable) = 22.00

Justification / Notes :

Channel begins at a limestone outcrop near the northern site boundary. Flow is intermittent throughout channel and

disappears at some karst-dominated areas. HD secondary score completed near northern reach of channel; stream

geomorphology, hydrology, and biology become stronger as the channel flows south; therefore, the downstream reach of

S1 would obtain a higher score than 22.00.

Secondary Field Indicator Evaluation

A. Geomorphology (Subtotal = 9.00	Absent	Weak	Moderate	Strong	
1. Continuous bed and bank	0	1	2	3	1
2. Sinuous channel	0	1	2	3	0.5
3. In-channel structure: riffle-pool sequences	0	1	2	3	1
4. Sorting of soil textures or other substrate	0	1	2	3]1
5. Active/relic floodplain	0	0.5	1	1.5	0.5
6. Depositional bars or benches	0	1	2	3	1
7. Braided channel	0	1	2	3	0
8. Recent alluvial deposits	0	0.5	1	1.5	1
9. Natural levees	0	1	2	3	0
10. Headcuts	0	1	2	3	0
11. Grade controls	0	0.5	1	1.5	1.5
12. Natural valley or drainageway	0	0.5	1	1.5	1.5
13. At least second order channel on existing USGS or NRCS map	0	1	2	3	0

B. Hydrology (Subtotal = 6.00	Absent	Weak	Moderate	Strong	
14. Subsurface flow/discharge into channel	0	1	2	3	1
15. Water in channel and >48 hours since sig.	0	1	2	3	1
rain					
16. Leaf litter in channel	1.5	1	0.5	0	0.5
17. Sediment on plants or on debris	0	0.5	1	1.5	1
18. Organic debris lines or piles (wrack lines)	0	0.5	1	1.5	1
19. Hydric soils in channel bed or sides of channel	No	0	Yes	= 1.5	1.5

7 00					
C. Biology (Subtotal 7.00	Absent	Weak	Moderate	Strong	
20. Fibrous roots in channel bed ¹	3	2	1	0	1
21. Rooted plants in the thalweg ¹	3	2	1	0	2
22. Crayfish in stream (exclude in floodplain)	0	1	2	3	0
23. Bivalves/mussels	0	1	2	3	0
24. Amphibians	0	0.5	1	1.5	0
25. Macrobenthos (record type & abundance)	0	1	2	3	1
26. Filamentous algae; periphyton	0	1	2	3	2
27. Iron oxidizing bacteria/fungus	0	0.5	1	1.5	0
28. Wetland plants in channel bed ²	0	0.5	1	1.5	1
¹ Ecous is on the presence of terrestrial plants	2 Ecous i	s on the pro	sonce of aquat	tic or wotland n	lante

Focus is on the presence of terrestrial plants.

² Focus is on the presence of aquatic or wetland plants.

Total Points = 22.00

Under Normal Conditions, Watercourse is a Wet Weather Conveyance if Secondary Indicator Score < 19 points

Notes :



Tennessee Department of Environment and Conservation - Division of Water Resources

312 Rosa L. Parks Ave. 11th Floor. Nashville, TN 37243

Hydrologic Determination Field Data Sheet

Tennessee Division of Water Resources, Version 1.5 (Fillable Form)

Named Waterbody: UNT to Aenon Creek - S2E	Date/Time: 10/12/21	
Assessors/Affiliation: S&ME, Inc. (J. Rowe 1103-TN12, S. ROWE 1012-	-TN11)	Project ID :
Site Name/Description: Brandywine Farm		218947
Site Location: Southwestern corner of site		
HUC (12 digit): 060400030201	Latitude: 35.72	14
Previous Rainfall (7-days) : 1.2 inches (1.1 on 10/5, 0.1 on 10/6)	19	
Precipitation this Season vs. Normal : Source of recent & seasonal precip. data : Anteced	lent Precipitation Tool	
Watershed Size : <0.01 square miles	County: Maury	
Soil Type(s) / Geology : Lindside silt loam, eroded gently sloping phase / limestone/karst	Source: USDA	/ USGS
Surrounding Land Use : Agriculture, residential		
Degree of historical alteration to natural channel morphology & hvdrolog Slight	gy (select one & des	cribe fully in Notes) :

Primary Field Indicators Observed

Primary Indicators	NO	YES
1. Hydrologic feature exists solely due to a process discharge	\checkmark	WWC
2. Defined bed and bank absent, vegetation composed of upland and FACU species	✓	WWC
3. Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions		WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	\checkmark	WWC
 Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase 	\checkmark	Stream
6. Presence of fish (except Gambusia)	\checkmark	Stream
7. Presence of naturally occurring ground water table connection	\checkmark	Stream
8. Flowing water in channel and 7 days since last precip >0.1" in local watershed		Stream
9. Evidence watercourse has been used as a supply of drinking water	\checkmark	Stream

NOTE: If any Primary Indicators 1-9 = "Yes", then no further investigation is necessary. However, assessors may choose to score secondary indicators as supporting evidence.

In the absence of a primary indicator, or other definitive evidence, complete the secondary indicator table on page 2 of this sheet, and provide score below.

Guidance for the interpretation and scoring of both the primary & secondary indicators is provided in TDEC-DWR Guidance For Making Hydrologic Determinations, Version 1.5

Overall Hydrologic Determination = WET WEATHER CONVEYANCE

Secondary Indicator Score (if applicable) = 12.00

Justification / Notes :

S2E originates at a shallow headcut near the western site boundary. The channel is ill-defined in many areas; however, some of the forested sections of channel possess a significant bed/bank.

1

Secondary Field Indicator Evaluation

A. Geomorphology (Subtotal = ^{8.00}	Absent	Weak	Moderate	Strong	
1. Continuous bed and bank	0	1	2	3	1.5
2. Sinuous channel	0	1	2	3	0
3. In-channel structure: riffle-pool sequences	0	1	2	3	1
4. Sorting of soil textures or other substrate	0	1	2	3	1
5. Active/relic floodplain	0	0.5	1	1.5	0
6. Depositional bars or benches	0	1	2	3	0.5
7. Braided channel	0	1	2	3	0
8. Recent alluvial deposits	0	0.5	1	1.5	1
9. Natural levees	0	1	2	3	0
10. Headcuts	0	1	2	3	0.5
11. Grade controls	0	0.5	1	1.5	1
12. Natural valley or drainageway	0	0.5	1	1.5	1.5
13. At least second order channel on existing USGS or NRCS map	0	1	2	3	0

2 00			1	1	
B. Hydrology (Subtotal = 2.00	Absent	Weak	Moderate	Strong	
14. Subsurface flow/discharge into channel	0	1	2	3	0
15. Water in channel and >48 hours since sig.	0	1	2	3	0
rain					U
16. Leaf litter in channel (January –	1.5	1	0.5	0	0.5
September)					0.5
17. Sediment on plants or on debris	0	0.5	1	1.5	1
18. Organic debris lines or piles (wrack lines)	0	0.5	1	1.5	0.5
19. Hydric soils in channel bed or sides of	No :	= 0	Yes	= 1.5	
channel					0

0.00					
C. Biology (Subtotal = 2.00	Absent	Weak	Moderate	Strong	
20. Fibrous roots in channel bed ¹	3	2	1	0	1
21. Rooted plants in the thalweg ¹	3	2	1	0	1
22. Crayfish in stream (exclude in floodplain)	0	1	2	3	0
23. Bivalves/mussels	0	1	2	3	0
24. Amphibians	0	0.5	1	1.5	0
25. Macrobenthos (record type & abundance)	0	1	2	3	0
26. Filamentous algae; periphyton	0	1	2	3	0
27. Iron oxidizing bacteria/fungus	0	0.5	1	1.5	0
28. Wetland plants in channel bed ²	0	0.5	1	1.5	0
1 Focus is on the procence of terrestrial plants		a an tha nra	aches of course	tio or watland n	lanta

¹ Focus is on the presence of terrestrial plants.

² Focus is on the presence of aquatic or wetland plants.

Total Points = 12.00

Under Normal Conditions, Watercourse is a Wet Weather Conveyance if Secondary Indicator Score < 19 points

Notes :

21. Rooted upland plants prevalent through much of the reach.

22 - 28. - No biological indicators observed.

14 - 15. - Channel dry with no saturation of the hyporheic zone present.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Brandywine Farm	City/County:	Nashville / Dav	idson	Sampling Dat	e: 12-Oct-21
Applicant/Owner: State Street Group		State: 1	N Sam	pling Point:	UpA
Investigator(s): Sarah Rowe, Josh Rowe (S&ME, Inc.)	Section, Tow	nship, Range:	s T		R
Landform (hillslope, terrace, etc.): Floodplain	Local relief (co	ncave, convex,	none): rolling	Slope:	% / °
Subregion (LRR or MLRA): LRR N La	at.: 35.725412	Lo	ong.: -86.913213		Datum: NAD83
Soil Map Unit Name: Rb - Gladeville-Rock outcrop complex, 2-15	% slopes, extremel	y stony	NWI classi	fication: Uplar	nd
Are Vegetation , Soil , or Hydrology , signific Are Vegetation , Soil , or Hydrology , natural Summary of Findings - Attach site map showing	antly disturbed? Ily problematic? g sampling po	Are "Norm (If needed Dint locatio	al Circumstances" , explain any answ ns, transects	present? Ye vers in Remarks ; important	es ● No ○ .) t features, etc.
Hydrophytic Vegetation Present? Yes \bigcirc No $oldsymbol{igstar}$					
Hydric Soil Present? Yes 🔾 No 🖲	Is the	Sampled Area	Yes 🔿 No 🖲		
Wetland Hydrology Present? Yes \bigcirc No $oldsymbol{igodol}$	withir	a Wetland?			
Remarks:					
Upland point is located along the floodplain of an UNT to Aenon	Creek slightly upslo	ope from a gro	undwater seep-fec	l wetland.	

Hydrology

Wetland Hydrology Indicat	ore			
	urs.			Secondary Indicators (minimum of two required)
	um or one n	equirea; c		Surface Soil Cracks (B6)
Surface Water (A1)				Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)			U Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3)			Oxidized Rhizospheres along Living Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1)			Presence of Reduced Iron (C4)	Dry Season Water Table (C2)
Sediment Deposits (B2)			Recent Iron Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)
Drift deposits (B3)			Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)			Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)				Geomorphic Position (D2)
Inundation Visible on Aeri	al Imagery (B	7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)))			Microtopographic Relief (D4)
Aquatic Fauna (B13)				FAC-neutral Test (D5)
Field Observations:				
Surface Water Present?	Yes \bigcirc	No 🖲	Depth (inches):	
Water Table Present?	Yes \bigcirc	No 🖲	Depth (inches):	
Saturation Present? (includes capillary fringe)	$_{\rm Yes}$ \bigcirc	No 🖲	Depth (inches): Wetland Hy	ydrology Present? Yes 🔾 No 🖲
Saturation Present? (includes capillary fringe) Describe Recorded Data (s	Yes O	No 💿 e, monitor	Depth (inches): Wetland Hy ring well, aerial photos, previous inspections), if av	ydrology Present? Yes O No • /ailable:
Saturation Present? (includes capillary fringe) Describe Recorded Data (s	Yes O	No • e, monitor	Depth (inches): Wetland Hy ring well, aerial photos, previous inspections), if av	ydrology Present? Yes O No 🖲 <i>v</i> ailable:
Saturation Present? (includes capillary fringe) Describe Recorded Data (s Remarks:	Yes O	No • e, monitor	Depth (inches): Wetland Hy	ydrology Present? Yes 🔾 No 🖲 /ailable:
Saturation Present? (includes capillary fringe) Describe Recorded Data (s Remarks: No hydrology indicators ob	Yes O tream gauge	No e, monitor	Depth (inches): Wetland Hy ring well, aerial photos, previous inspections), if av	ydrology Present? Yes O No 🖲
Saturation Present? (includes capillary fringe) Describe Recorded Data (s Remarks: No hydrology indicators ob	Yes O tream gauge	No • e, monitor	Depth (inches): Wetland Hy ring well, aerial photos, previous inspections), if av	ydrology Present? Yes 🔾 No 🖲
Saturation Present? (includes capillary fringe) Describe Recorded Data (s Remarks: No hydrology indicators ob	Yes O tream gauge oserved at up	No e, monitor	Depth (inches): Wetland Hy fing well, aerial photos, previous inspections), if av	ydrology Present? Yes O No •
Saturation Present? (includes capillary fringe) Describe Recorded Data (s Remarks: No hydrology indicators ob	Yes O	No e, monitor	Depth (inches): Wetland Hy ring well, aerial photos, previous inspections), if av	ydrology Present? Yes O No •
Saturation Present? (includes capillary fringe) Describe Recorded Data (s Remarks: No hydrology indicators ob	Yes O	No	Depth (inches): Wetland Hy ring well, aerial photos, previous inspections), if av	ydrology Present? Yes 🔾 No 🖲
Saturation Present? (includes capillary fringe) Describe Recorded Data (s Remarks: No hydrology indicators ob	Yes O	No e, monitor pland poir	Depth (inches): Wetland Hy ring well, aerial photos, previous inspections), if av	ydrology Present? Yes 🔾 No 🖲
Saturation Present? (includes capillary fringe) Describe Recorded Data (s Remarks: No hydrology indicators ob	Yes O	No e, monitor pland poir	Wetland Hy Depth (inches): ring well, aerial photos, previous inspections), if av	ydrology Present? Yes 🔾 No 🖲
Saturation Present? (includes capillary fringe) Describe Recorded Data (s Remarks: No hydrology indicators ob	Yes O	No () e, monitor pland poir	Depth (inches): Wetland Hy ring well, aerial photos, previous inspections), if av	ydrology Present? Yes 🔾 No 🖲
Saturation Present? (includes capillary fringe) Describe Recorded Data (s Remarks: No hydrology indicators ob	Yes O	No () e, monitor pland poir	Wetland Hy Depth (inches):	ydrology Present? Yes 🔾 No 🖲
Saturation Present? (includes capillary fringe) Describe Recorded Data (s Remarks: No hydrology indicators ob	Yes O	No e, monitor pland poir	Depth (inches):	ydrology Present? Yes O No 🖲
Saturation Present? (includes capillary fringe) Describe Recorded Data (s Remarks: No hydrology indicators ob	Yes O	No e, monitor pland poir	Depth (inches):	ydrology Present? Yes O No 🖲
Saturation Present? (includes capillary fringe) Describe Recorded Data (s Remarks: No hydrology indicators ob	Yes O tream gauge	No e, monitor pland poir	Wetland Hy Depth (inches): ring well, aerial photos, previous inspections), if av	ydrology Present? Yes O No 🖲

VEGETATION (Five/Four Strata)- Use scientific names of plants.

		Dominant		Sampling Point: UpA			
Tree Stratum (Plot size: 30 ft)	Absolute % Cover	– Species? – Rel.Strat. Cover	Indicator Status	Dominance Test worksheet:			
1		0.0%		Number of Dominant Species That are OBL_EACW_or_EAC:0(A)			
2		0.0%					
2	0	0.0%		Total Number of Dominant			
3	0	0.0%		Species Across All Strata:(B)			
4	0	0.0%		Percent of dominant Species			
6	0	0.0%		That Are OBL, FACW, or FAC:(A/B)			
7	0	0.0%		Provalence Index worksheet:			
9	0	0.0%		Total % Cover of: Multiply by:			
0	0	= Total Cover		$\mathbf{OB} \mathbf{species} 0 \mathbf{x} 1 = 0$			
Sapling-Sapling/Shrub Stratum (Plot size: 15 ft)		_		$\frac{1}{1} = \frac{1}{1} = \frac{1}$			
1. Juniperus virginiana	5	✓ 100.0%	FACU	$\frac{1}{2} = \frac{1}{2}$			
2		0.0%		FAC species $0 \times 3 = 0$			
3		0.0%		FACU species $\frac{72}{0}$ x 4 = $\frac{200}{0}$			
4		0.0%		UPL species $-\frac{1}{2}$ x 5 = $-\frac{1}{2}$			
5		0.0%		Column Totals: <u>72</u> (A) <u>288</u> (B)			
6	0	0.0%		Prevalence Index = $B/A = 4.000$			
7	0	0.0%		Hydrophytic Vegetation Indicators:			
8	0	0.0%		Rapid Test for Hydrophytic Vegetation			
9	0	0.0%		Dominance Test is > 50%			
10	0	0.0%		$\square \text{ Prevalence Index is } \leq 30^{-1}$			
Shruh Stratum (Plot size:		= Total Cover		Morphological Adaptations ¹ (Provide supporting			
1,	0	0.0%		data in Remarks or on a separate sheet)			
2	0	0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)			
3	0	0.0%		¹ Indicators of hydric soil and wetland hydrology must			
4	0	0.0%		be present, unless disturbed or problematic.			
5	0	0.0%		Definition of Vegetation Strata:			
6	0	0.0%		Four Vegetation Strata:			
7	0	0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH),			
Herb Stratum (Plot size: <u>5 ft</u>))		= Total Cover		regardless of height.			
1. Festuca arundinacea	40	✓ 59.7%	FACU	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in, DBH and greater than 3 28 ft (1 m) tall			
2. Amaranthus retroflexus	20	29.9%	FACU	Herb stratum – Consists of all herbaceous (non-woody) plants,			
3. Symphyotrichum ericoides	2	3.0%	FACU	regardless of size, and all other plants less than 3.28 ft tall.			
4. Ambrosia artemisiifolia	3	4.5%	FACU	Woody vines – Consists of all woody vines greater than 3.28 ft			
5. Solidago canadensis	2	3.0%	FACU	in neight.			
6	0	0.0%		Five Vegetation Strata:			
7	0	0.0%		Tree - Woody plants, avoluting woody vince, approximately 20			
8	0	0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in			
9.	0	0.0%		diameter at breast height (DBH).			
10.	0	0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less			
11.	0	0.0%		than 3 in. (7.6 cm) DBH.			
12.	0	0.0%		Shrub stratum – Consists of woody plants, excluding woody			
Weady Vine Stratum (Plot size:	67 =	= Total Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.			
	0	0.0%		including herbaceous vines, regardless of size, and woody			
l 2				species, except woody vines, less than approximately 3 ft (1			
2	0			Woody vince Consists of all woody vince recerclose of			
J	0			height.			
4							
5	0			Hydrophytic			
б	0			Vegetation Present? Yes O No 🖲			
		= Total Cover	-				

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

Vegetation at the upland comprised of primarily FACU species.

Donth	Matrix			dov Fostu	roc			
(inches)	Color (moist)	0/6	Color (moist)	0%	Type ¹	Loc ²	Texture	Remarks
0-12	10YR 4/3	100		/0	TYDE	LUC	Silty Clay	Keinarks
0 12								
							p7	
			u					
ype: C=Conc	centration. D=Depletio	n. RM=Redu	iced Matrix, CS=Cover	ed or Coate	d Sand Grai	ns ² Locat	ion: PL=Pore Lining. M=M	atrix
ydric Soil Iı	ndicators:		_				Indicators for Proble	matic Hydric Soils ³ :
Histosol (A	A1)		Dark Surface (S7)			2 cm Muck (A10)	(MI RA 147)
Histic Epip	edon (A2)		Polyvalue Belo	w Surface (58) (MLRA :	47,148)		
Black Histi	c (A3)		Thin Dark Surf	ace (S9) (M	LRA 147, 14	8)	Coast Prairie Redo	ox (A16)
Hvdroaen	Sulfide (A4)		I oamv Gleved	Matrix (F2)			(MLRA 147,140)	
Stratified I	avers (A5)			(F3)			Piedmont Floodpla (MLDA 126, 147)	ain Soils (F19)
							(MLRA 150, 147)	
	(A10) (LRR N)						Very Shallow Dark	Surface (TF12)
Depleted E	Below Dark Surface (A	11)	Depleted Dark	Surface (F7	')		Other (Explain in	Remarks)
Thick Dark	k Surface (A12)		Redox Depress	sions (F8)				
Sandy Muc MLRA 147	ck Mineral (S1) (LRR N , 148)	Ι,	Iron-Manganes MLRA 136)	se Masses (I	F12) (LRR N	,		
Sandy Glev	yed Matrix (S4)		Umbric Surfac	e (F13) (ML	RA 136, 122	2)	2	
Sandy Red	lox (S5)		Piedmont Floo	dplain Soils	(F19) (MLR	A 148)	³ Indicators of	hydrophytic vegetation and
	Aatrix (S6)		Pod Parent Ma	atorial (E21)	(MI DA 127	147)	wetland hyd	rology must be present,
						147)	uness us	
	(if a base of a local state of the second stat							
estrictive La	iyer (if observed):							
estrictive La	iyer (if observed):						Hydric Soil Present?	Yes 🔾 No 🖲
Type:	ayer (if observed):						-	
estrictive La Type: Depth (inch	nes):							
Type: Depth (inch emarks:	nes):							
estrictive La Type: Depth (inch emarks: hydric soil	indicators observed	d at the up	land data point.					
estrictive La Type: Depth (inch emarks: hydric soil	indicators observed	d at the up	land data point.					
estrictive La Type: Depth (inch emarks: hydric soil	indicators observed	d at the up	land data point.					
estrictive La Type: Depth (inch emarks: hydric soil	indicators observed	d at the up	land data point.					
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strictive La Type: Depth (inch emarks: hydric soil	indicators observed	d at the up	land data point.					
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estrictive La Type: Depth (inch emarks: hydric soil	indicators observed	d at the up	land data point.					
strictive La Type: Depth (inch emarks: hydric soil	indicators observed	d at the up	land data point.					

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Brandywine Farm	City/County:	Nashville / Da	avidson	Samp	ling Date: 12-	Oct-21
Applicant/Owner: State Street Group		State:	TN	Sampling Po	oint:	UpB
Investigator(s): Sarah Rowe, Josh Rowe (S&ME, Inc.)	Section, Tow	nship, Range	: S	т	R	
Landform (hillslope, terrace, etc.): Floodplain	Local relief (co	ncave, conve	x, none): rolling	Slope: 0.0	<u>%/</u> °
Subregion (LRR or MLRA): LRR N Lat.:	35.725127		Long.:	-86.912820	Datur	n: NAD83
Soil Map Unit Name: Rb - Gladeville-Rock outcrop complex, 2-15% s	lopes, extremel	y stony		NWI classification	1: Upland	
Are Vegetation , Soil , or Hydrology significant Are Vegetation , Soil , or Hydrology naturally p Summary of Findings - Attach site map showing s	ily disturbed? problematic? campling po	Are "Nor (If neede	mal Circ ed, expl	cumstances" present ain any answers in F transects, imp	t? Yes Remarks.)	_{No} 〇 tures, etc.
Hydrophytic Vegetation Present?Yes ○No ●Hydric Soil Present?Yes ○No ●Wetland Hydrology Present?Yes ○No ●	Is the within	Sampled Are	a Yes	; 🔿 No 🖲		
Remarks: Upland point is located along the floodplain of an UNT to Aenon Cre	ek slightly upslo	ope from a gr	roundwa	ater seep-fed wetlar	ıd.	

Hydrology

Wetland Hydrology Indicat	tors:				Secondary Indicators (minimum of two required)
Primary Indicators (minim	um of one	required;	check all that apply)	L	Surface Soil Cracks (B6)
Surface Water (A1)			True Aquatic Plants (B14)	L	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)			Hydrogen Sulfide Odor (C1)		Drainage Patterns (B10)
Saturation (A3)			Oxidized Rhizospheres along Living Ro	oots (C3)	Moss Trim Lines (B16)
Water Marks (B1)			Presence of Reduced Iron (C4)	[Dry Season Water Table (C2)
Sediment Deposits (B2)			Recent Iron Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)
Drift deposits (B3)			Thin Muck Surface (C7)		Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)			Other (Explain in Remarks)	[Stunted or Stressed Plants (D1)
Iron Deposits (B5)				[Geomorphic Position (D2)
Inundation Visible on Aeri	ial Imagery (B7)		[Shallow Aquitard (D3)
Water-Stained Leaves (B9	9)			[Microtopographic Relief (D4)
Aquatic Fauna (B13)				[FAC-neutral Test (D5)
Field Observations:	0				
Surface Water Present?	Yes \bigcirc	No 🖲	Depth (inches):		
Weber Telde Discout?					
water Table Present?	τ es \bigcirc		Depth (inches):		
Water Table Present? Saturation Present? (includes capillary fringe)	Yes 〇	No 🖲	Depth (inches):	Wetland Hydrol	ogy Present? Yes 🔿 No 🖲
Saturation Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (s	Yes O	No () ge, monito	Depth (inches): Depth (inches): pring well, aerial photos, previous inspe	Wetland Hydro	ogy Present? Yes No 💿
Saturation Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (s	Yes O	No () No () ge, monito	Depth (inches): Depth (inches): pring well, aerial photos, previous inspe	Wetland Hydrol ections), if availal	ogy Present? Yes O No 💿
Saturation Present? (includes capillary fringe) Describe Recorded Data (s Remarks:	Yes O	No 💿	Depth (inches): Depth (inches): pring well, aerial photos, previous inspe	Wetland Hydrol	ogy Present? Yes O No 🖲
Saturation Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (s Remarks: No hydrology indicators ob	Yes O	No • No • ge, monito	Depth (inches): Depth (inches): pring well, aerial photos, previous inspe	Wetland Hydrol ections), if availal	ogy Present? Yes O No 🖲
Saturation Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (s Remarks: No hydrology indicators ob	Yes O Yes O tream gaug	No e, monito	Depth (inches): Depth (inches): pring well, aerial photos, previous inspe	Wetland Hydrol ections), if availal	ogy Present? Yes O No O
Saturation Present? (includes capillary fringe) Describe Recorded Data (s Remarks: No hydrology indicators ob	Yes O Yes O tream gaug	No • ge, monito	Depth (inches): Depth (inches): pring well, aerial photos, previous inspe	Wetland Hydrol	ogy Present? Yes O No O
Saturation Present? (includes capillary fringe) Describe Recorded Data (s Remarks: No hydrology indicators ob	Yes O Yes O tream gaug	No	Depth (inches): Depth (inches): pring well, aerial photos, previous inspe	Wetland Hydrol	ogy Present? Yes O No O
Saturation Present? (includes capillary fringe) Describe Recorded Data (s Remarks: No hydrology indicators ob	Yes Yes tream gaug	No	Depth (inches): Depth (inches): pring well, aerial photos, previous inspe	Wetland Hydrol ections), if availal	ogy Present? Yes O No O
Saturation Present? (includes capillary fringe) Describe Recorded Data (s Remarks: No hydrology indicators ob	Yes Yes tream gaug	No	Depth (inches): Depth (inches): pring well, aerial photos, previous inspe	Wetland Hydrol ections), if availal	ogy Present? Yes O No O
Saturation Present? (includes capillary fringe) Describe Recorded Data (s Remarks: No hydrology indicators ob	Yes O Yes O oserved at u	No	Depth (inches): Depth (inches): pring well, aerial photos, previous inspe	Wetland Hydrol ections), if availal	ogy Present? Yes O No O
Saturation Present? (includes capillary fringe) Describe Recorded Data (s Remarks: No hydrology indicators ob	Yes O Yes O oserved at t	No () ge, monito	Depth (inches): Depth (inches): pring well, aerial photos, previous inspe	Wetland Hydrol ections), if availat	ogy Present? Yes O No O
Saturation Present? (includes capillary fringe) Describe Recorded Data (s Remarks: No hydrology indicators ob	Yes O	No () ge, monito	Depth (inches): Depth (inches): pring well, aerial photos, previous inspe	Wetland Hydrol	ogy Present? Yes O No O
Saturation Present? (includes capillary fringe) Describe Recorded Data (s Remarks: No hydrology indicators ob	Yes O Yes O tream gaug	No	Depth (inches): Depth (inches): pring well, aerial photos, previous inspe	Wetland Hydrol	ogy Present? Yes O No O
Saturation Present? (includes capillary fringe) Describe Recorded Data (s Remarks: No hydrology indicators ob	Yes O Yes O tream gaug	No	Depth (inches): Depth (inches): pring well, aerial photos, previous inspe	Wetland Hydrol	ogy Present? Yes O No O
Saturation Present? (includes capillary fringe) Describe Recorded Data (s Remarks: No hydrology indicators ob	Yes O Yes O thream gaug	No	Depth (inches): Depth (inches): pring well, aerial photos, previous inspe	Wetland Hydrol	ogy Present? Yes O No O

VEGETATION (Five/Four Strata)- Use scientific names of plants.

		Dominant		Sampling Point: UpB			
Trop Stratum (Plot size: 30 ft)	Absolute % Cover		Indicator Status	Dominance Test worksheet:			
Tree Stratum (Field Steel /				Number of Dominant Species			
1		0.0%		$\frac{1}{1}$			
2	0			Total Number of Dominant			
3				Species Across All Strata:(B)			
4 5				Percent of dominant Species			
6		0.0%		That Are OBL, FACW, or FAC:(A/B)			
7	0	0.0%		Prevalence Index worksheet:			
8	0	0.0%		Total % Cover of: Multiply by:			
0	0 =	= Total Cover		OBL species $0 \times 1 = 0$			
Sapling-Sapling/Shrub Stratum (Plot size: 15 ft)			FACW species $5 \times 2 = 10$			
1		0.0%		EAC species $0 \times 3 = 0$			
2		0.0%		FAC species $35 \times 4 = 340$			
3		0.0%		FACU Spectes $33 \times 4 = 310$			
4		0.0%		UPL species \longrightarrow x 5 = \longrightarrow			
5		0.0%		Column Totals: 90 (A) 350 (B)			
6	0	0.0%		Prevalence Index = $B/A = 3.889$			
7	0	0.0%		Hydrophytic Vegetation Indicators:			
8	0	0.0%		Rapid Test for Hydrophytic Vegetation			
9	0	0.0%		Dominance Test is > 50%			
10	0	0.0%		Prevalence Index is \leq 3.0 1			
Shrub Stratum (Plot size:)	:	= Total Cover		Morphological Adaptations ¹ (Provide supporting			
1	0	0.0%		data in Remarks or on a separate sheet)			
2	0	0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)			
3	0	0.0%		¹ Indicators of hydric soil and wetland hydrology must			
4	0	0.0%		be present, unless disturbed or problematic.			
5	0	0.0%		Definition of Vegetation Strata:			
6	0	0.0%		Four Vegetation Strata:			
7	0	0.0%		(7.6 cm) or more in diameter at breast height (DBH),			
Herb Stratum (Plot size: <u>5 ft</u>)		= Total Cover		regardless of height.			
1. Festuca arundinacea	10	11.1%	FACU	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in, DBH and greater than 3.28 ft (1 m) tall.			
2. Persicaria pensylvanica	5	5.6%	FACW	Herb stratum – Consists of all herbaceous (non-woody) plants,			
3. Cynodon dactylon	60	66.7%	FACU	regardless of size, and all other plants less than 3.28 ft tall.			
4. Amaranthus retroflexus	15	16.7%	FACU	Woody vines – Consists of all woody vines greater than 3.28 ft			
5		0.0%		in neight.			
6	0	0.0%		Five Vegetation Strata:			
7	0	0.0%		Tree - Woody plants, excluding woody vines, approximately 20			
8	0	0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in			
9	0	0.0%		diameter at breast height (DBH). Sapling stratum – Consists of woody plants, evoluting woody.			
10	0	0.0%		vines, approximately 20 ft (6 m) or more in height and less			
11	0	0.0%		than 3 in. (7.6 cm) DBH.			
12	0	0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.			
Woody Vine Stratum (Plot size:)	90 =	= Total Cover		Herb stratum – Consists of all herbaceous (non-woody) plants,			
1	0	0.0%		including herbaceous vines, regardless of size, and woody			
2	0	0.0%		m) in height.			
3	0	0.0%		Woody vines – Consists of all woody vines, regardless of			
4	0	0.0%		height.			
5	0	0.0%		Hudrophytic			
6	0	0.0%					
	0	= Total Cove	r	Present? Yes 🔾 No 🔍			
Demonstrative (Tablade all the same have been as an experience all							

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

Vegetation at the upland comprised of primarily FACU species.

Cited (moist) % Color (moist) % Type:	Denth	Matrix		Re	dox Featu	ires			
0-4 1078 3/2 100 Sity Clay 0-4 1078 3/2 100 Sity Clay 0-4 1078 3/2 100 Sity Clay 0-4 1078 100 100 100 0-5 100 100 100 100 0-6 100 100 100 100 0-7 100 100 100 100 0-7 100 100 100 100 0-7 100 100 100 100 100 0-7 100 100 100 100 100 100 100 100 <t< th=""><th>(inches)</th><th>Color (moist)</th><th>%</th><th>Color (moist)</th><th>%</th><th>Tvpe ¹</th><th>Loc²</th><th>Texture</th><th>Remarks</th></t<>	(inches)	Color (moist)	%	Color (moist)	%	Tvpe ¹	Loc ²	Texture	Remarks
pe: C=Concentration. D=Expletion. RM=Reduced Matrix, CS=Covered or Coated Sand Graims *Location: ?L=Pore Lining, M=Matrix ref Soll Indicators: Indicators for Problematic Hydric Solls ³ : Histosol (A1) Dark Surface (S7) Histosol (A2) Polyvalue Bolow Surface (S8) (MLRA 147,148) Back Histic (A3) The Dark Surface (S7) Hydrogen Sulfide (A4) Learny Gleyed Matrix (?L) 2 cm Muck (A10) (URR N) Redox Dark Surface (F7) Muck (A10) (LRR N) Redox Dark Surface (F7) Muck (A10) (LRR N) Depleted Dark Surface (F12) (LRR N, MIRA 136) Sandy Redox (S5) Depleted Dark Surface (F12) (LRR N, MIRA 136) Sandy Cleyed Matrix (S4) Umbric Surface (F13) (MLRA 148) Sandy Cleyed Matrix (S5) Pedmont Floodplain Soils (F19) (MLRA 148) Trictice Layer (if observed): Try Rei J Radeox Material (F21) (MLRA 148) Type: Beditorck Polytin (indicators observed) at the upland data point. Yeg No Imarks:	0-4	10YR 3/2	100					Silty Clay	
pe: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains *Location: FL=Pore Lining, M=Matrix dric Soil Indicators: Indicators for Problematic Hydric Soils ³ : Histic Epipedon (A2) Dark Surface (S7) Black Histic (A3) Thin Dark Surface (S7) Histic Epipedon (A2) Depleted Matrix (F2) Depleted Watrix (F2) Depleted Matrix (F2) Depleted Matrix (F3) Depleted Matrix (F2) Depleted Matrix (F3) Depleted Matrix (F2) Depleted Matrix (F4) Depleted Matrix (F2) Sandy Mack X Surface (A12) Redox Depressions (F8) Sandy Mack Surface (A2) Redox Depressions (F8) Sandy Mack Surface (A2) Redox Depressions (F8) Sandy Redox (S5) Depleted Hatrix (F4) Umbric Surface (F12) (LRR N, MIRA 136, 147) MiRA 136, 147) Sandy Redox (S5) Pelemonic Floodplan Foils (F12) (LRR N, MIRA 136, 147) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Type: Bedirock Depleted level of thordpaphric vegetation and network of problematic. Type: Bedirock and hydrology matrix table processor. Unbric Soil Indicators observed at the upland data point.									
web: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains *Lccation: PL=Pore Lining. M=Matrix the Soil Indicators: Indicators for Problematic Hydric Soils?: Histord (A1) Dark Surface (S7) Black Histor (A2) Doyobue Bdow Surface (S8) (MLRA 147, 148) Black Histor (A3) Thin Dark Surface (S9) (MLRA 147, 148) Suthlet Layers (S5) Depleted Matrix (F2) Suthlet Layers (S5) Depleted Matrix (F7) Depleted Below Dark Surface (K11) Depleted Dark Surface (F7) Thick Dark Surface (L32) Redox Dark Surface (F7) Sandy Redox (S5) Depleted Below Surface (F12) (URR N, MLRA 147, 148) MLRA 147, 148) Inci-Atlanganese Masses (F12) (URR N, MLRA 147, 149) Sandy Redox (S5) Depleted Park Materia (F2) (MLRA 127, 147) Indicators of hydrophytic vegetation and wetchind hydroging must be present, unless disturbed or problemate. Thrice Soil Present? Yes No ® Papetry (Index): 6. No ® marks: ydric soil indicators observed at the upland data point.		·							
pe: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains *Location: PL=Pore Lining, M=Matrix drfc Soil Indicators: import the source (S7) import the source (S8) Import the source (S8) Import the source (S8) Histic Epipedin (A2) import the source (S8) Import the source (S8) Import the source (S8) Import the source (S8) Statified (A4) import Glevel Matrix (F2) import the source (F7) import the source (F7) Statified Layers (A5) import CP source (F7) import the source (F7) import the source (F7) Thick Surface (A11) import CP source (F12) import the source (F12) import the source (F12) Source (A12) import CP source (F7) import the source (F12) import the source (F12) Source (A12) import CP source (F13) import the source (F12) import the source (F12) Source (A13) import the source (F13) import the source (F12) import the source (F12) Source (A14) import the source (F13) import the source (F12) import the source (F12) Source (A147, 148) import the source (F13) import the source (F12) import the source (F12) Source (A147, 148) import the source (F13) import the so								-	
pe: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains *Location: PL=Pore Lining, M=Matrix drif: Soil Indicators:									
ype: C.⊂Oncentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains *Locaton: PL=-Pore Lining, M=Matrix ydric Soil Indicators: indicators or Problematic Hydric Soils? Indicators or Problematic Hydric Soils? ististics (1A) Dark Surface (S7) Indicators or Problematic Hydric Soils? ististics (A1) Doark Surface (S9) (MLRA 147, 148) Indicators or Problematic Hydric Soils? ististics (A3) Dark Surface (S9) (MLRA 147, 148) Indicators or Problematic Hydric Soils (F19) ististics (A1) Depleted Matrix (F2) Coast Parine Redox (A16) ististics (A11) Depleted Matrix (F3) Indicators or Problematic Hydric Soils (F19) ististics (A14) Loamy Gleyed Matrix (F3) Indicators of hydrophytic vegetation and wettend Hydrics (S1) (MLRA 147, 148) isnary Muck Matrics (S1) Redox Depressions (F8) Indicators of hydrophytic vegetation and wettend Hydrics (S1) (MLRA 147, 148) isnary Muck Matrix (F3) Indicators of hydrophytic vegetation and wettend Hydrics (S1) (MLRA 147, 148) Indicators of hydrophytic vegetation and wettend Hydrics wettend in Problematic. strictive Layer (if observed): Type: Bedrice/Layer (if observed): Type: Bedrice/Layer (if observed): Type: Bedrice/Layer (if observed): A Hydric Soil Present? Yes No • Hydric so									
ype: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains *Location: PL=Pore Lining. M=Matrix ydric Soil Indicators:									
ype: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ³ Location: PL=Pone Lining. M=Matrix yrder: Soll Tutilicators: Indicators (ST) Histosol (A1) Dark Surface (S7) Histosol (A2) Dark Surface (S9) (MLRA 147, 148) Back Histo (CA3) Dark Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Bark Surface (A11) Depleted Matrix (F3) Z orn Muck (A10) (MLRA 117) Depleted Dark Surface (F7) Nick CA10 (LRR N) Depleted Dark Surface (F7) Depleted Bark Surface (A11) Depleted Dark Surface (F12) Depleted Park (S4) Umbric Surface (F13) (MLRA 136, 147) Sandy Rdack Wined (S1) (LRR N, MLRA 136) MLRA 136, 147) Sandy Rdack Wined (S5) Depleted Dark Surface (F13) (MLRA 126, 122) Sandy Rdack (Mered (S1) Depleted Dark Surface (F13) (MLRA 126, 127) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Velamint Michaed (S5) Red Parent Material (F21) (MLRA 127, 147) Undextors of hydrophytic vegetation and welam dyndrophytic wegetation and welam dyndrophytic wegetatin and material (F21) (MLRA 127, 147)						-	-		
ype: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains *Location: PL=Pore Lining. M=Matrix yfric Soil Indicators:									
ype: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ² Location: PL=Pore Lining. M=Matrix ydric Soil Indicators: Histic Spipedon (A2) Dark Surface (57) Biack Histic (A3) Dark Surface (59) (MLRA 147, 148) Biack Histic (A3) Discrete (A11) Depleted Matrix (F2) Depleted Matrix (F3) Com Muck (A10) (RLR N) Redox Dark Surface (F7) Thick Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Muck (Mineral (S1) (RLR N, MLRA 136) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 142, 147) Stripped Matrix (S6) Hedmont Floodplain Soils (F19) (MLRA 147, 148) Hydric Soil Present? Yes No **********************************									
ype: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ² Location: PL=Pore Lining. M=Matrix ydric Soil Indicators for Problematic Hydric Soils ³ : Histics (A1) Dark Surface (S7) Diana (A17,148) Casar Praine Redox (A16) (HLRA 147,148) Depleted Below Surface (F6) Depleted Matrix (F2) Casar Praine Redox (A16) (HLRA 147,148) Depleted Matrix (F3) Depleted Matrix (F2) (HLRA 147,148) Depleted Matrix (F2) (HLRA 147,148) Depleted Matrix (F2) (HLRA 147,148) Depleted Matrix (F3) Muck (A10) (HLRA 147, 148) Muck (A10) (HLRA N) Depleted Matrix (F3) Depleted Matrix (F3) Muck A110, (HLRA 147, 148) Muck (A12) (HLRA N) Depleted Matrix (F3) Depleted Matrix (F3) Muck A110, (HLRA 148) Muck (A12) (HLRA 148) Muck (A13) (HLRA 148) Muck (A13) (HLRA 148) Muck (A147, 148) Muck (A13) (HLRA 148) Muck (A13) (HLRA 148) Muck (A13) (HLRA 148) Muck (A147, 148) Muck (A13) (HLRA 148) Muck (A13) (HLRA 148) Muck (A147, 148) Muck (A15) (HLRA 148) Muck (A15) (HLRA 148) Muck (A16) (HLRA 148) Muck (A16) (HLRA 148) Muck (A16) (HLRA 148) Muck (A16) (HLRA 148) Muck (A17, 148) Muck (A17, 148) Muck (A17, 148) Muck (A18, 148) Muck (A18, 148) Muck (A19, 148) Muck (A110, 148) Muck (A10) (HLRA 148) Muck (A110, 148) Muc									
<pre>ype: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2Location: PL=Pore Lining, M=Matrix yfric Soil Indicators:</pre>									
dric Soll Indicators: Idicators for Problematic Hydric Solls ³ :	pe: C=Con	centration. D=Depletic	on. RM=Redu	uced Matrix, CS=Covere	ed or Coate	ed Sand Gra	ins ² Locat	tion: PL=Pore Lining. M=M	atrix
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Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (X3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stattled Layers (A5) Depleted Matrix (F2) Depleted Matrix (F2) Piedmont Floodplain Solis (F19) Depleted Delow Dark Surface (A11) Depleted Dark Surface (F6) Depleted Dark Surface (A12) Redox Dark Surface (F12) Sandy Muck Mineral (S1) (LRR N, MLRA 136, 122) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S5) Piedmont Floodplain Solis (F19) (MLRA 147, 148) Sandy Gleyed Matrix (S5) Piedmont Floodplain Solis (F19) (MLRA 147, 147) Sandy Gleyed Matrix (S5) Piedmont Floodplain Solis (F19) (MLRA 148) Stripped Matrix (S5) Red Parent Material (F21) (MLRA 147, 147) strictive Layer (If observed): Type: Redirack Type: Redirack Pothric soil Indicators observed at the upland data point.	Histosol ((A1)		Dark Surface (S7)				ematic Hydric Solis":
Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Phydrogen Surface (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Depleted Matrix (F3) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Muck Mineral (S1) (LRR N, MLRA 136) Tron-Manganese Masses (F12) (LRR N, MLRA 136) Sandy Gleyed Matrix (54) Umbric Surface (F13) (MLRA 147, 148) Sandy Redox (S5) Pledmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) astrictive Layer (If observed): Type: _Bedrock	Histic Epi	pedon (A2)		Polyvalue Belov	w Surface ((S8) (MLRA	147,148)	2 cm Muck (A10)	(MLRA 147)
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Plefadmont Floodplain Solis (F19) (MLRA 136, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) (MLRA 136, 147) Depleted Bork Surface (F7) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Muck Mineral (S1) (LRR N, MLRA 136) Iono-Manganese Masses (F12) (MLRA 136, 122) Sandy Redox (S5) Pledmont Floodplain Solis (F19) (MLRA 136, 122) Sandy Redox (S5) Pledmont Floodplain Solis (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) astrictive Layer (if observed): Type: _Bedmock Depth (inches): 6. emarks: 'hydric soil indicators observed at the upland data point.	Black His	tic (A3)		Thin Dark Surfa	ace (S9) (M	1LRA 147, 1	.48)	Coast Prairie Red	ox (A16)
Stratified Layers (A5) Depleted Matrix (F3) Pleatmont Pioophain Solis (F19) 2 cm Muck (A10) (LR N) Redox Dark Surface (F6) Very Shallow Dark Surface (T12) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Sandy Gleyed Matrix (S4) Iron-Manganese Masses (F12) (LR N, MLRA 136, 122) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S5) Pleatmont Floodplain Solis (F19) (MLRA 148) ³ Indicators of hydrophytic vegetation and wetand hydrology must be present, unless disturbed or problematic. stripted Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) ³ Indicators of hydrophytic vegetation and wetand hydrology must be present, unless disturbed or problematic. stripted Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) ************************************	Hydroger	n Sulfide (A4)		Loamy Gleyed	Matrix (F2))			
2 cm Muck (A10) (LR N) Redox Dark Surface (F6) Usery Shallow Dark Surface (TF12) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Other (Explain in Remarks) Sandy Muck Mineral (S1) (LR N, MURA 136) Umbric Surface (F12) (LR N, MURA 136, 122) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) ************************************	Stratified	Layers (A5)		Depleted Matri	x (F3)			(MLRA 136, 147)	ain Solis (F19)
□ Depleted Below Dark Surface (A11) □ Depleted Dark Surface (F7) □ Other (Explain in Remarks) □ Trick Dark Surface (A12) □ Redox Depressions (F8) □ Other (Explain in Remarks) □ Sandy Muck Mineral (S1) (LRR N, MLRA 136) □ Inon-Manganese Masses (F12) (LRR N, MLRA 136, 122) □ Sandy Gleyed Matrix (S4) □ Umbric Surface (F13) (MLRA 136, 122) □ Sandy Redox (S5) □ Pledmont Floodplain Solis (F9) (MLRA 148) □ and wetland hydrology must be present, unless disturbed or problematic. Striped Matrix (S6) □ Red Parent Material (F21) (MLRA 127, 147) □ unless disturbed or problematic. strictive Layer (if observed): Type: _Bedrack	2 cm Muc	ck (A10) (LRR N)		Redox Dark Su	rface (F6)			Very Shallow Dar	k Surface (TF12)
Thick Dark Surface (A12) Redox Depressions (F8) I'ron-Manganese Masses (F12) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) I'ron-Manganese Masses (F12) (MLRA 148) I'ron-Manganese Masses (F12) (MLRA 148) Sandy Gleyed Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 147, 147) I'ron-Manganese Masses (F12) (MLRA 127, 147) I'ron-Manganese Masses (F12) (MLRA 127, 147) Sandy Gleyed Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) I'ron-Manganese Masses (F12) (MLRA 127, 147) strictive Layer (if observed): Type: Bedrock Hydric Soil Present? Yes No Depth (inches): _6 No marks: I'rydric soil indicators observed at the upland data point. No	Depleted	Below Dark Surface (A	11)	Depleted Dark	Surface (F	7)		Other (Explain in	Remarks)
Sandy Muck Mineral (S1) (LRR N, MLRA 136) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Sandy Ruck (S4) Umbris Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) estrictive Layer (if observed): Type: _Bedrock Depth (inches): _6 Hydric Soil Present? Yes No ● emarks: • hydric soil indicators observed at the upland data point.	Thick Dar	rk Surface (A12)	-	Redox Depress	ions (F8)				remanoy
Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Wetland hydrology must be present, unless disturbed or problematic.	Sandy Mu	uck Mineral (S1) (LRR M	Ν,	Iron-Manganes MLRA 136)	e Masses ((F12) (LRR	Ν,		
Sandy Redox (S5) ☐ Piedmont Floodplain Soils (F19) (MLRA 148) Sandy Redox (S5) ☐ Red Parent Material (F21) (MLRA 127, 147) stripped Matrix (S6) ☐ Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. testrictive Layer (if observed): Type: Bedrock Depth (inches): 6. Hydric Soil Present? Yes No ● remarks: hydroic soil indicators observed at the upland data point.	Sandy Gl	eved Matrix (S4)		Umbric Surface	e (F13) (ML	_RA 136, 12	2)		
Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) wetrand hydrology must be present; unless disturbed or problematic. estrictive Layer (if observed): Type: Bedrock Depth (inches): 6 Hydric Soil Present? Yes No • No •	Sandy Re	edox (S5)		Piedmont Floo	dplain Soils	(F19) (ML	RA 148)	³ Indicators of	hydrophytic vegetation and
estrictive Layer (if observed): Type: _Bedrock Depth (inches): _6 Hydric Soil Present? Yes No • Itemarks: • • hydric soil indicators observed at the upland data point.	Stripped	Matrix (S6)		Red Parent Ma	terial (F21)) (MLRA 12	7. 147)	wetland hyd unless di	Irology must be present, sturbed or problematic.
tititive Layer (if observed): Type: _Bedrock Depth (inches): _6							, ,		• • • • • • • • • • • • • • • • • • • •
Type: _Bedrock Depth (inches):	estrictive L	ayer (if observed):							
Depth (inches): 6 rygin: Son Present: Yes C NO C emarks: a) hydric soil indicators observed at the upland data point.	Type: <u>B</u>	ledrock						Hydric Soil Brocont?	
emarks: hydric soil indicators observed at the upland data point.	Depth (inc	thes): <u>6</u>						Hydric Soll Present?	
hydric soil indicators observed at the upland data point.	emarks:								
	hydric soi	il indicators observe	d at the up	land data point.					

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Brandywine Farm		City/C	County: Nashville / David	son	Sampling Date:	12-Oct-21
Applicant/Owner: State Street Grou	lb di		State: TN	Sampl	ing Point:	UpC
Investigator(s): Sarah Rowe, Josh	Rowe (S&ME, Ir	IC.) Secti	on, Township, Range: S	т	R	
Landform (hillslope, terrace, etc.):	Floodplain	Local r	elief (concave, convex, r	ione): flat	Slope:	0.0 %/ 0.0 °
Subregion (LRR or MLRA): LRR	 N	Lat.: 35.72	5412 Lo r	na.: -86.913213	D;	atum: NAD83
Soil Map Unit Name: Lc - Lindell	silt loam, 0-2%	slopes, frequently flooded		NWI classifie	cation: Upland	
Are climatic/hydrologic conditions	on the site typ	ical for this time of year?	Yes 🖲 No 🔾 🛛 (If no,	, explain in Remark	(s.)	
Are Vegetation 🗌 , Soil 🗌	, or Hydrolc	ogy 🗌 significantly distu	rbed? Are "Normal	Circumstances" p	resent? Yes	● _{No} ○
Are Veaetation 🗌 , Soil 🗌	, or Hydrolc	naturally problem	atic? (If needed,	explain any answe	rs in Remarks.)	
Summary of Findings - A	ttach site	map showing sampl	ing point location	ns, transects,	important f	eatures, etc.
Hydrophytic Vegetation Present?	Yes O	No 🔍				
Hydric Soil Present?	Yes \bigcirc	No 🖲	Is the Sampled Area			
Wetland Hydrology Present?	Yes \bigcirc	No 🖲	within a Wetland?			
Upland point is located along the	floodplain of	an Aenon Creek.				
Hydrology						
Wetland Hydrology Indicators:				Secondary Indicator	rs (minimum of two	o required)
Primary Indicators (minimum of	one required;	check all that apply)		Surface Soil Cra	icks (B6)	
Surface Water (A1)		True Aquatic Plants (B14)		Sparsely Vegeta	ated Concave Surfa	ace (B8)
High Water Table (A2)		Hydrogen Sulfide Odor (C1	.)	Drainage Patter	ns (B10)	
Saturation (A3)		Oxidized Rhizospheres alon	ng Living Roots (C3)	Moss Trim Lines	s (B16)	
Water Marks (B1)		Presence of Reduced Iron ((C4)	Dry Season Wa	ter Table (C2)	
Sediment Deposits (B2)		Recent Iron Reduction in T	illed Soils (C6)	Crayfish Burrow	ıs (C8)	
Drift deposits (B3)		Thin Muck Surface (C7)		Saturation Visib	le on Aerial Imager	ry (C9)
		Other (Explain in Remarks))	Stunted or Stree	ssed Plants (D1)	
	ony (87)				sition (D2)	
Water-Stained Leaves (B9)	21y (D7)				a (U3) vic Poliof (D4)	
Aquatic Fauna (B13)					וד (ח5)	
Field Observations						
Surface Water Present? Yes) No 🖲	Depth (inches):				
Water Table Precent? Yes		Derth (inchas);				
Saturation Present?		Deptn (Inches):	Wetland Hyd	rology Present?	Yes \bigcirc No	\odot
(includes capillary fringe) Yes) No 🔍	Depth (inches):				
Describe Recorded Data (stream	gauge, monito	ring well, aerial photos, previ	ious inspections), if avail	lable:		
Remarks:						
No hydrology indicators observed	at upland poi	nt.				
	at the set					

VEGETATION (Five/Four Strata)- Use scientific names of plants.

		Dominant		Sampling Point: UpC			
Tree Stratum (Plot size: 30 ft)	Absolute % Cover	– Species? – Rel.Strat. Cover	Indicator Status	Dominance Test worksheet:			
1		0.0%		Number of Dominant Species That are OBL_EACW_or_EAC'0 (A)			
2		0.0%					
3	0	0.0%		Total Number of Dominant			
Λ	0	0.0%		Species Across All Strata: <u>2</u> (B)			
4 5	0	0.0%		Percent of dominant Species			
6	0	0.0%		That Are OBL, FACW, or FAC:(A/B)			
7	0	0.0%		Prevalence Index worksheet:			
8	0	0.0%		Total % Cover of: Multiply by:			
0	0 =	= Total Cover		OBL species $0 \times 1 = 0$			
Sapling-Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)		_		EACW species $5 \times 2 = 10$			
1		0.0%		$\frac{1}{2} = \frac{1}{2}$			
2		0.0%		FAC spectes 20 x 3 = 00			
3		0.0%		FACU species 0 x $4 = 200$			
4		0.0%		UPL species $-\frac{1}{2}$ x 5 = $-\frac{1}{2}$			
5		0.0%		Column Totals: 92 (A) 338 (B)			
6	0	0.0%		Prevalence Index = $B/A = 3.674$			
7	0	0.0%		Hydrophytic Vegetation Indicators:			
8	0	0.0%		Rapid Test for Hydrophytic Vegetation			
9	0	0.0%		Dominance Test is > 50%			
10	0	0.0%		Prevalence Index is \leq 3.0 ¹			
Shrub Stratum (Plot size:)	:	= Total Cover		Morphological Adaptations ¹ (Provide supporting			
<u> </u>	0	0.0%		data in Remarks or on a separate sheet)			
2	0	0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)			
3	0	0.0%		¹ Indicators of hydric soil and wetland hydrology must			
4	0	0.0%		be present, unless disturbed or problematic.			
5	0	0.0%		Definition of Vegetation Strata:			
6.	0	0.0%		Four Vegetation Strata:			
7.	0	0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.			
Horb Stratum (Plot size: 5 ft)	0 =	= Total Cover		regardless of height.			
	30	32.6%	FACU	Sapling/shrub stratum – Consists of woody plants, excluding			
2 Andronogon virginicus	30	32.6%	FACU	vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb stratum – Consists of all berbaceous (non-woody) plants			
2. Andropogon derardii	10	10.9%	FAC	regardless of size, and all other plants less than 3.28 ft tall.			
A Rudbeckia hirta	5	5.4%	FACU	Woody vines – Consists of all woody vines greater than 3.28 ft			
5. Persicaria pensylvanica	5	5.4%	FACW	in height.			
6 Rumex crispus	5	5.4%	FAC	Fire Manadation Charles			
7 Convza canadensis	2	2.2%	FACU	Five vegetation strata:			
8 Vernonia gigantea	5	5.4%	FAC	Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in			
9	0	0.0%		diameter at breast height (DBH).			
10	0	0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less			
11.	0	0.0%		than 3 in. (7.6 cm) DBH.			
12	0	0.0%		Shrub stratum – Consists of woody plants, excluding woody			
(Plot size)	92 =	= Total Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.			
Woody Vine Stratum (Plot size:)		0.0%		including herbaceous vines, regardless of size, and woody			
l				species, except woody vines, less than approximately 3 ft (1			
2							
J				height.			
4							
5				Hydrophytic			
0	0			Vegetation Present? Yes O No O			

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

Vegetation at the upland comprised of primarily FACU and FAC species.

Domt	Matrix		Po	dox Feature	res		· · · · · · · · · · · · · · · · · · ·	
(inches)	Color (moist)	0/2	Color (moist)	0%	Type ¹		Texture	Remarks
0-12	10VP 4/4	100		-70	IVDE		Silty Clay	Relians
					· ·			
Type: C=Conce	entration. D=Depletio	n. RM=Redu	uced Matrix, CS=Covere	ed or Coate	d Sand Grai	ns ² Locat	ion: PL=Pore Lining. M=Ma	atrix
Hydric Soil In	dicators:						Indicators for Proble	matic Hydric Soils ³ :
Histosol (A	1)		Dark Surface (S7)			2 cm Muck (A10)	(MI PA 147)
Histic Epipe	edon (A2)		Polyvalue Belov	w Surface (S8) (MLRA	L47,148)		
Black Histic	c (A3)		Thin Dark Surfa	ace (S9) (M	LRA 147. 14	18)	Coast Prairie Redo	x (A16)
Hvdrogen	Sulfide (A4)			Matrix (E2)	, -	,	(MLRA 147,148)	
							Piedmont Floodpla	ain Soils (F19)
	ayers (AS)			x (F3)			(MLRA 136, 147)	
2 cm Muck	(A10) (LRR N)		Redox Dark Su	rface (F6)			Very Shallow Dark	Surface (TF12)
Depleted B	elow Dark Surface (A	11)	Depleted Dark	Surface (F7	')		Other (Explain in I	Remarks)
Thick Dark	Surface (A12)		Redox Depress	ions (F8)			• • • • • • • • • • • • • • • • •	······,
Sandy Muc	k Mineral (S1) (LRR N	J	Iron-Manganes	e Masses (F12) (LRR N	l,		
MLRA 147,	148)	•/	MLRA 136)					
Sandy Gley	ved Matrix (S4)		Umbric Surface	e (F13) (ML	RA 136, 12	2)		
Sandy Redu	ox (S5)		Piedmont Floor	dolain Soils	(F19) (MI R	A 148)	³ Indicators of I	nydrophytic vegetation and
	$o_{X}(33)$					147)	wetland hyd	rology must be present,
🔄 Stripped Ma	atrix (S6)			teriai (F21)	(MLRA 127	, 147)	uniess dis	turbed or problematic.
Restrictive Lay	yer (if observed):							
Restrictive Lay	yer (if observed):						Underla Call Dessant2	
Restrictive Lay	yer (if observed):						Hydric Soli Present?	
Restrictive Lay Type: Depth (inche	yer (if observed):						Hydric Soll Present?	
Type: Depth (inche Remarks:	es):	d at the up	land data point				nyaric Soil Present?	
Restrictive Lay Type: Depth (inche Remarks: o hydric soil i	yer (if observed):	d at the up	land data point.				nyaric Soll Present?	
Restrictive Lay Type: Depth (inche Remarks: lo hydric soil i	yer (if observed):	d at the up	land data point.				nyaric Soli Present?	
Restrictive Lay Type: Depth (inche Remarks: Io hydric soil i	yer (if observed):	d at the up	land data point.				nyaric Soli Present?	
Restrictive Lay Type: Depth (inche Remarks: Io hydric soil i	yer (if observed):	d at the up	land data point.				nyaric Soli Present?	
Restrictive Lar Type: Depth (inche Remarks: o hydric soil i	yer (if observed):	d at the up	land data point.				nyaric Soli Present?	
Restrictive Lar Type: Depth (inche Remarks: o hydric soil i	yer (if observed):	d at the up	land data point.				nyaric Soli Present?	
Restrictive Lar Type: Depth (inche Remarks: Io hydric soil i	yer (if observed):	d at the up	land data point.				nyaric Soli Present?	
Restrictive Lar Type: Depth (inche Remarks: o hydric soil i	yer (if observed):	d at the up	land data point.				nyaric Soli Present?	
Restrictive Lar Type: Depth (inche Remarks: o hydric soil i	yer (if observed):	d at the up	land data point.				riyaric Soli Present?	
Restrictive Lar Type: Depth (inche Remarks: o hydric soil i	yer (if observed):	d at the up	land data point.				ryaric Soli Present?	
Restrictive Lar Type: Depth (inche Remarks: o hydric soil i	yer (if observed):	d at the up	land data point.				ryaric Soli Present?	
Restrictive Lar Type: Depth (inche Remarks: Io hydric soil i	yer (if observed):	d at the up	land data point.				ryaric Soli Present?	
Restrictive Lar Type: Depth (inche Remarks: Io hydric soil i	yer (if observed):	d at the up	land data point.				riyaric Soli Present?	
Restrictive Lar Type: Depth (inche Remarks: Io hydric soil i	yer (if observed):	d at the up	land data point.				riyaric Soli Present?	
Restrictive Lar Type: Depth (inche Remarks: Io hydric soil i	yer (if observed):	d at the up	land data point.				ryaric soil Present?	
Restrictive Lar Type: Depth (inche Remarks: Io hydric soil i	yer (if observed):	d at the up	land data point.				ryaric soil Present?	
Restrictive Lar Type: Depth (inche Remarks: Io hydric soil i	yer (if observed):	d at the up	land data point.				ryaric soil Present?	
Restrictive Lar Type: Depth (incho Remarks: o hydric soil i	yer (if observed):	d at the up	land data point.				nyaric soil Present?	
Restrictive Lar Type: Depth (inche Remarks: o hydric soil i	yer (if observed):	d at the up	land data point.				nyaric soil Present?	
Restrictive Lar Type: Depth (incho Remarks: to hydric soil i	yer (if observed):	d at the up	land data point.				nyaric soil Present?	

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Brandywine Farm	City/County:	Nashville / Davidson	Sampl	ing Date: 12-0	ct-21
Applicant/Owner: State Street Group		State: TN	Sampling Poi	int: (JpD
Investigator(s): Sarah Rowe, Josh Rowe (S&ME, Inc.)	Section, Tow	nship, Range: S	т	R	
Landform (hillslope, terrace, etc.): Hillside	Local relief (co	ncave, convex, none)	concave	Slope: 0.0	%/ <u>0.0</u> °
Subregion (LRR or MLRA): LRR N Lat	t.: 35.726278	Long.:	-86.914801	Datum	NAD83
Soil Map Unit Name: Tb - Talbott silty clay, severely eroded sloping	g phase		NWI classification:	Upland	
Are climatic/hydrologic conditions on the site typical for this time of	iyear? Yes 🖲	No 🔘 (If no, exp	lain in Remarks.)	\sim	\sim
Are Vegetation 🗌 , Soil 🗌 , or Hydrology 🗌 significa	antly disturbed?	Are "Normal Circ	umstances" present?	?Yes 🖲	No 🔾
Are Vegetation 🗌 , Soil 🗌 , or Hydrology 🗌 naturally	y problematic?	(If needed, expla	ain any answers in R	emarks.)	
Summany of Findings - Attach site man showing	, compling po	int locations t	rancocto imno	ortant foat	uros oto

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes 🖲	No O		
Hydric Soil Present?	Yes \bigcirc	No 🖲	Is the Sampled Area	
Wetland Hydrology Present?	Yes 🖲	No O	within a Wetland?	
Bomorke				

Remarks:

Upland point is located within an area shown as an open-water pond on historic aerial photographs. No inundation observed during the site visit, and soils within the depression are not hydric. Feature likely only holds rainfall for a short term.

Hydrology

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one required	l; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3)	Oxidized Rhizospheres along Living Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry Season Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)
Drift deposits (B3)	Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)		Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)		Microtopographic Relief (D4)
Aquatic Fauna (B13)		FAC-neutral Test (D5)
Field Observations:		
Surface Water Present? Yes 🔾 No 🖲	Depth (inches):	
Water Table Present? Yes O No 🖲	Depth (inches):	
Saturation Present? (includes capillary fringe) Yes O No •	Wetland I Depth (inches):	Hydrology Present? fes 👻 NO 🖯
Describe Recorded Data (stream gauge, mon	itoring well, aerial photos, previous inspections), if a	available:
Remarks:		
A primary and secondary hydrology indicator	present.	
, , , , ,		

VEGETATION (Five/Four Strata)- Use scientific names of plants.

		Dominant		Sampling Point: UpD
	Absolute	-Species? - Rel.Strat.	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30 ft</u>)	% Cover	Cover	Status	Number of Dominant Species
1		0.0%		That are OBL, FACW, or FAC: <u>6</u> (A)
2		0.0%		Tatal Number of Demisert
3	0	0.0%		Species Across All Strata: 6 (B)
4	0	0.0%		
5	0	0.0%		Percent of dominant Species
6	0	0.0%		That Are OBL, FACW, or FAC: 100.0% (70)
7	0	0.0%		Prevalence Index worksheet:
8	0	0.0%		Total % Cover of: Multiply by:
	0 =	= Total Cover		OBL species30x 1 =30
Sapling-Sapling/Shrub Stratum (Plot size: 15π			0.01	FACW species x 2 =30
1. Salix nigra	10	▼ 100.0%	OBL	FAC species 25 x 3 = 75
2				FACU species $\frac{7}{100} \times 4 = \frac{28}{100}$
3				$\begin{array}{c} 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 $
4				$\frac{1}{2} = \frac{1}{2} = \frac{1}$
5				$\begin{array}{c} \text{Column lotals:} \underline{//} \text{(A)} \underline{103} \overline{(0)} \\ \end{array}$
6	0			Prevalence Index = $B/A = 2.117$
7				Hydrophytic Vegetation Indicators:
8				Rapid Test for Hydrophytic Vegetation
9				✓ Dominance Test is > 50%
10	0	0.0%		✓ Prevalence Index is ≤3.0 1
Shrub Stratum (Plot size:)	10	= Total Cover		Morphological Adaptations ¹ (Provide supporting
1	0	0.0%		data in Remarks or on a separate sheet)
2	0	0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
3	0	0.0%		¹ Indicators of hydric soil and wetland hydrology must
4	0	0.0%		be present, unless disturbed or problematic.
5	0	0.0%		Definition of Vegetation Strata:
6	0	0.0%		Four Vegetation Strata:
7	0	0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH),
Herb Stratum (Plot size: <u>5 ft</u>)		= Total Cover		regardless of height.
1. Xanthium strumarium	10	✓ 14.9%	FAC	Sapling/shrub stratum – Consists of woody plants, excluding vines, less than 3 in, DBH and greater than 3 28 ft (1 m) tall
2. Eleocharis obtusa	10	✔ 14.9%	OBL	Herb stratum – Consists of all herbaceous (non-woody) plants,
3. Carex frankii	10	✔ 14.9%	OBL	regardless of size, and all other plants less than 3.28 ft tall.
4. Rumex crispus	15	22.4%	FAC	Woody vines – Consists of all woody vines greater than 3.28 ft
5. Persicaria maculosa	5	7.5%	FACW	in neight.
6. Bidens aristosa	10	✔ 14.9%	FACW	Eive Vegetation Strata:
7. Ambrosia artemisiifolia	5	7.5%	FACU	Tree Weedu plante evolution weedu ince envroyimetely 20
8. Symphyotrichum ericoides	2	3.0%	FACU	ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9.	0	0.0%		diameter at breast height (DBH).
10.	0	0.0%		Sapling stratum – Consists of woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
11.	0	0.0%		than 3 in. (7.6 cm) DBH.
12.	0	0.0%		Shrub stratum – Consists of woody plants, excluding woody
Weady Vine Stratum (Plot size:	67 =	= Total Cover		vines, approximately 3 to 20 ft (1 to 6 m) in neight. Herb stratum – Consists of all berbaceous (non-woody) plants
	0	0.0%		including herbaceous vines, regardless of size, and woody
2				species, except woody vines, less than approximately 3 ft (1 m) in height
2		0.0%		Woody vines - Consists of all woody vines regardless of
۰ ۸	<u>_</u>			height.
- 				
D.				Hydrophytic
0				Present? Yes No
Demandras (Tarabada adasta assaultara barra ang ang a				

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

Vegetation within the depression consists of hydrophytic vegetation.

		Matrix			Redox Features			_	
(inches)	Color	(moist)	%	Color	(moist)	%	Tvpe ¹	Loc ²	TextureRemarks
0-1	10YR	6/2	98	10YR	4/6	2			Silty Clay
1-12	10YR	4/4	90	10YR	3/4				Silty Clay
		_ <u> </u>							·
pe: C=Con	centration. [D=Depletic	on. RM=Redu	uced Matrix,	CS=Cover	ed or Coate	d Sand Gra	ins ² Loca	ation: PL=Pore Lining. M=Matrix
Histosol (A1)			Dar	k Surface (CT)			Indicators for Problematic Hydric Soils ³
Histic Epij Black Hist Hydrogen Stratified 2 cm Muc Depleted Thick Dar Sandy Mu MLRA 147 Sandy Gle Sandy Re Stripped I	bedon (A2) ic (A3) Sulfide (A4 Layers (A5) k (A10) (LRI Below Dark k Surface (A ick Mineral (7, 148) eyed Matrix dox (S5) Matrix (S6)) Surface (A \12) S1) (LRR N (S4)	N11) N,	Poly Poly Poly Poly Red Pop Red Pop Red Pop Red Pop Red Pop Red	value Belo Dark Surf my Gleyed Jeted Matri ox Dark Su Jeted Dark ox Depress Anaganes (A 136) bric Surface dmont Floo	S7) w Surface (ace (S9) (M Matrix (F2) x (F3) urface (F6) Surface (F6) Surface (F6) se Masses (e (F13) (ML dplain Soils uterial (F21)	S8) (MLRA ILRA 147, 1 7) F12) (LRR N RA 136, 12 (F19) (MLR (MLRA 127	147,148) 48) J, , A 148) 7, 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) ³ Indicators of hydrophytic vegetation wetland hydrology must be presen unless disturbed or problematic

No dominant hydric soil indicators observed at the upland data point. The depleted matrix is less than an inch thick and only observed within a 10-ft square area.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Bra	ndywine Farm				City/County:	Nashville / D	e / Davidson Samplir		ing Date: 12-Oct-21		
Applicant/Owner:	State Stree	t Group				State:	TN	Sampling Po	int:	WA	
Investigator(s):	Sarah Rowe,	Josh Ro	we (S&ME, Inc.)		Section, Tow	nship, Range	: S	тт	R		
Landform (hillslop	e, terrace, e	tc.):	Floodplain		Local relief (co	ncave, conve	ex, none)	rolling	Slope:	.0_%/	0.0 °
Subregion (LRR or	MLRA):	LRR N		Lat.	35.725277		Long.:	-86.913082	Dat	um: NAD8	3
Soil Map Unit Nam	e: Rb - Gl	adeville	Rock outcrop c	omplex, 2-15%	slopes, extremel	y stony		NWI classification	Upland		
Are climatic/hydro Are Vegetation	ologic condit	tions on	the site typical , , or Hydrology	for this time of y	year? Yes 🖲	No O (If	f no, exp mal Circ	lain in Remarks.) umstances" present	? Yes	No 🔿	
Are Vegetation	🗌 , Soil		, or Hydrology	naturally	problematic?	(If need	ed, expla	ain any answers in R	emarks.)		

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes ● Yes ● Yes ●	No () No () No ()	Is the Sampled Area within a Wetland?	Yes 🖲 No 🔿
Remarks: Wetland is located along the flood	plain of S1 a	and originates at a groundwat	er seep.	

Hydrology

Wetland Hydrology Indicat	ors:					Secondary Indicators (minimum of two required)
Primary Indicators (minim	um of one	Surface Soil Cracks (B6)				
Surface Water (A1)			True Aquatic Plants (B	14)		Sparsely Vegetated Concave Surface (B8)
✓ High Water Table (A2)			Hydrogen Sulfide Odor	r (C1)		✓ Drainage Patterns (B10)
Saturation (A3)			 Oxidized Rhizospheres 	along Living	Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1)			Presence of Reduced 1	iron (C4)		Dry Season Water Table (C2)
Sediment Deposits (B2)			Recent Iron Reduction	in Tilled Soils	s (C6)	Crayfish Burrows (C8)
Drift deposits (B3)			Thin Muck Surface (C7	′)		Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)			Other (Explain in Rema	arks)		Stunted or Stressed Plants (D1)
Iron Deposits (B5)				-		Geomorphic Position (D2)
Inundation Visible on Aeri	al Imagery (B7)				Shallow Aquitard (D3)
Water-Stained Leaves (B9)					Microtopographic Relief (D4)
Aquatic Fauna (B13)						✓ FAC-neutral Test (D5)
Field Observations:	0	0				
Surface Water Present?	Yes \bigcirc	No 🖲	Depth (inches):			
Water Table Present?	Yes 🖲	No \bigcirc	Depth (inches):	1		
Saturation Present? (includes capillary fringe)	Yes 🖲	$_{\rm No}$ \bigcirc	Depth (inches):	0	Wetland Hydr	Irology Present? Tes \odot NO \bigcirc
Describe Recorded Data (s	tream gau	ge, monito	ring well, aerial photos, p	previous ins	pections), if avail	ilable:
Remarks:						
Multiple hydrology indicato	rs present					
· · · · · · · · · · · · · · · · · · ·						

VEGETATION (Five/Four Strata)- Use scientific names of plants.

		Dominant		Sampling Point: WA
	Absolute	– Species? – Rel.Strat.	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30 ft</u>)	% Cover	Cover	Status	Number of Dominant Species
1		0.0%		That are OBL, FACW, or FAC:(A)
2	·	0.0%		Total Number of Dominant
3	0	0.0%		Species Across All Strata: <u>2</u> (B)
4	0			Deveent of dominant Crossics
5	0			That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
6	0			
7	0			Prevalence Index worksheet:
8	0			I otal % Cover or: Multiply by:
Sapling-Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)		= Total Cover		OBL species $45 \times 1 = 45$
1		0.0%		FACW species $15 \times 2 = 30$
2		0.0%		FAC species $5 \times 3 = 15$
3		0.0%		FACU species <u>10</u> x 4 = <u>40</u>
4		0.0%		UPL species $0 \times 5 = 0$
5		0.0%		Column Totals: <u>75</u> (A) <u>130</u> (B)
6	0	0.0%		Prevalence Index = B/A = 1.733
7	0	0.0%		Hydrophytic Vegetation Indicators
8	0	0.0%		Rapid Test for Hydrophytic Vegetation
9	0	0.0%		\checkmark Dominance Test is > 50%
10	0	0.0%		V Prevalence Index is $\leq 30^{-1}$
Shruh Stratum (Plot size:)		= Total Cover		Prevalence Index is 25.0 Mornhological Adaptations ¹ (Provide supporting
1.	0	0.0%		data in Remarks or on a separate sheet)
2	0	0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)
3	0	0.0%		¹ Indicators of hydric soil and wetland hydrology must
4	0	0.0%		be present, unless disturbed or problematic.
5	0	0.0%		Definition of Vegetation Strata:
6	0	0.0%		Four Vegetation Strata:
7	0	0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH)
Herb Stratum (Plot size: <u>5 ft</u>)	0 =	= Total Cover		regardless of height.
1 Carex frankij	45	✔ 60.0%	OBL	Sapling/shrub stratum – Consists of woody plants, excluding
2 Persicaria maculosa	15	20.0%	FACW	Herb stratum – Consists of all herbaceous (non-woody) plants.
3 Festuca arundinacea	10	13.3%	FACU	regardless of size, and all other plants less than 3.28 ft tall.
4 Conoclinium coelestinum	5	6.7%	FAC	Woody vines – Consists of all woody vines greater than 3.28 ft
5		0.0%		in height.
6	0	0.0%		Five Vegetation Strata:
7	0	0.0%		Tree - Woody plants, excluding woody vines, approximately 20
8	0	0.0%		ft (6 m) or more in height and 3 in. (7.6 cm) or larger in
9	0	0.0%		diameter at breast height (DBH).
10	0	0.0%		vines, approximately 20 ft (6 m) or more in height and less
11	0	0.0%		than 3 in. (7.6 cm) DBH.
12	0	0.0%		Shrub stratum – Consists of woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height
Woody Vine Stratum (Plot size:)	75=	= Total Cover		Herb stratum – Consists of all herbaceous (non-woody) plants,
1	0	0.0%		including herbaceous vines, regardless of size, and woody
2.	0	0.0%		m) in height.
3	0	0.0%		Woody vines – Consists of all woody vines, regardless of
4	0	0.0%		height.
5	0	0.0%		
6.	0	0.0%		ryaropnytic Vegetation
	0	= Total Cover		Present? Yes \bullet No \bigcirc
Pemarks: (Include aboto numbers bere or on a senarate she				

e pl sepa eet.)

Wetland is a PEM dominated by hydrophytic herbaceous species.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS. US Army Corps of Engineers

Denth _	Matrix		F	edox Featu	ires			
inches)	es) Color (moist) %		Color (moist) <u>%</u> Type ¹		Loc ²	Texture	Remarks	
-10 -	10YR 4/2	95	10YR 4/6	5	<u> </u>	PL	Silty Clay	
							·	
C=Conce	entration. D=Depletio	on. RM=Redu	uced Matrix, CS=Cove	ered or Coate	ed Sand Gra	ins ² Locat	tion: PL=Pore Lining. M=Ma	atrix
istosol (A: istic Epipe	1) edon (A2)		Dark Surface	(S7) Iow Surface ((S8) (MLRA	147,148)	Indicators for Proble 2 cm Muck (A10) Coast Prairie Redo	matic Hydric Soils³: (MLRA 147) x (A16)
Jack Histic ydrogen S tratified La	: (A3) Sulfide (A4) ayers (A5)		Loamy Gleye	rface (S9) (N d Matrix (F2) trix (F3)	1LRA 147, 1)	48)	(MLRA 147,148) Piedmont Floodpla (MLRA 136, 147)	ain Soils (F19)
cm Muck epleted Be	(A10) (LRR N) elow Dark Surface (A	A11)	Redox Dark Surface (F6) Very Shallow Dark Surface (TF12) Depleted Dark Surface (F7) Other (Explain in Remarks) Redox Depressions (F8) Other (Explain in Remarks)				: Surface (TF12) Remarks)	
nick Dark andy Mucl ILRA 147,	Surface (A12) k Mineral (S1) (LRR I 148)	Ν,	Iron-Mangan MLRA 136)	ese Masses ((F12) (LRR I	Ν,		
andy Gley andy Redo tripped Ma	ved Matrix (S4) ox (S5) atrix (S6)		Ombric Surfa Piedmont Flo Red Parent N	oce (F13) (Mi podplain Soils Naterial (F21)	LRA 136, 12 5 (F19) (MLF) (MLRA 127	2) RA 148) 7, 147)	³ Indicators of l wetland hyd unless dis	nydrophytic vegetation and rology must be present, turbed or problematic.
ictive Lay	yer (if observed):							
ype: <u>Ber</u>							Hydric Soil Present?	Yes 🖲 No 🔾
arks:	cs). <u>_11</u>							
ossesse	d a depleted matri	ix within the	e upper 12 inches.					

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Bran	ndywine Farm				City/County: Nashville / Davidson			Sampling Date: 12-Oct-21				
Applicant/Owner:	State Stree	et Group					State:	TN	Sampling P	oint:	١	NB
Investigator(s):	Sarah Rowe	, Josh Ro	we (S&ME, Inc.)			Section, Tow	nship, Range	: S	тт		R	
Landform (hillslope	e, terrace, o	etc.):	Floodplain			Local relief (co	ncave, conve	ex, none)	rolling	Slope	0.0	%/°
Subregion (LRR or	MLRA):	LRR N		I	.at.:	35.725277		Long.:	-86.913082		Datum:	NAD83
Soil Map Unit Name	e: Rb - G	ladeville	-Rock outcrop o	complex, 2-15	5% s	lopes, extremely	y stony		NWI classification	ı: Upla	nd	
Are climatic/hydrol	logic condi	tions or	the site typical	for this time	of ye	ear?Yes 🖲		f no, exp	lain in Remarks.)			
Are Vegetation	, Soil		, or Hydrology	signifi	icant	ly disturbed?	Are "Nor	mal Circ	umstances" presen	t? Y	es 🖲	No O
Are Vegetation	, Soil		, or Hydrology	natura	ally p	oroblematic?	(If need	ed, expla	ain any answers in	Remarks	5.)	
										-		_

Summary of Findings - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes 🖲	No O		
Hydric Soil Present?	Yes 🖲	No O	Is the Sampled Area	Yes 🖲 No
Wetland Hydrology Present?	Yes 🖲	No 🔾	within a wetland?	
Remarks:				
Wetland is located along the flood	plain of S1	and originates at a groundwat	er seep.	

Hydrology

Wetland Hydrology Indicate	ors:			Secondary Indicators (minimum of two required)
Primary Indicators (minimu	um of one	Surface Soil Cracks (B6)		
Surface Water (A1)			True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
✓ High Water Table (A2)			Hydrogen Sulfide Odor (C1)	✓ Drainage Patterns (B10)
Saturation (A3)			✓ Oxidized Rhizospheres along Living Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1)			Presence of Reduced Iron (C4)	Dry Season Water Table (C2)
Sediment Deposits (B2)			Recent Iron Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)
Drift deposits (B3)			Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)			Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)				Geomorphic Position (D2)
Inundation Visible on Aeria	al Imagery (B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9))			Microtopographic Relief (D4)
Aquatic Fauna (B13)				✓ FAC-neutral Test (D5)
Field Observations:	0	0		
Surface Water Present?	Yes \bigcirc	No 🔍	Depth (inches):	
Water Table Present?	Yes 🖲	No \bigcirc	Depth (inches):1	
Saturation Present? (includes capillary fringe)	Yes 🖲	$_{\rm No}$ \bigcirc	Depth (inches): 0	Hydrology Present? Tes \odot NO \bigcirc
Describe Recorded Data (st	ream gaug	ge, monito	ring well, aerial photos, previous inspections), if a	available:
Remarks:				
Multiple hydrology indicator	rs present.			

VEGETATION (Five/Four Strata)- Use scientific names of plants.

		Dominant		Sampling Point: <u>WB</u>				
Tree Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	– Species? – Rel.Strat. Cover	Indicator Status	Dominance Test worksheet:				
1		0.0%		Number of Dominant Species That are OBL_EACW_or_EAC'2 (A)				
1		0.0%						
2	0			Total Number of Dominant				
3				Species Across All Strata:(B)				
4				Percent of dominant Species				
5	0			That Are OBL, FACW, or FAC:(A/B)				
0 7	0			Drouplance Index workshoet				
7 8				Total % Cover of Multiply by				
0	- <u> </u>	– Total Cover		$\frac{1}{1000} = \frac{1}{1000} = \frac{1}{1000} = \frac{1}{1000} = \frac{1}{10000} = \frac{1}{10000000000000000000000000000000000$				
Sapling-Sapling/Shrub Stratum (Plot size: 15 ft))			$\frac{1}{1}$				
1		0.0%		FACW species $25 \times 2 = 50$				
2		0.0%		FAC species $5 \times 3 = 15$				
3		0.0%		FACU species $10 \times 4 = 40$				
4.		0.0%		UPL species $0 \times 5 = 0$				
5.		0.0%		Column Totals: <u>80</u> (A) <u>145</u> (B)				
6.	0	0.0%	87 	Prevalence Index = $B/A = 1.813$				
7.	0	0.0%						
8.	0	0.0%		Papid Test for Hydrophytic Vegetation				
9.	0	0.0%						
10.	0	0.0%		✓ Dominance Test is > 50%				
Church Churchung (Diet size)	0 :	= Total Cover		✓ Prevalence Index is ≤3.0 ⁻				
<u>Snrub Stratum</u> (Piot size:) 1	0	0.0%		data in Remarks or on a separate sheet)				
2	0	0.0%		Problematic Hydrophytic Vegetation ¹ (Explain)				
3	0	0.0%		¹ Indicators of hydric soil and wetland hydrology must				
4	0	0.0%		be present, unless disturbed or problematic.				
5	0	0.0%		Definition of Vegetation Strata:				
6	0	0.0%		Four Vegetation Strata:				
7	0	0.0%		Tree stratum – Consists of woody plants, excluding vines, 3 in.				
Herb Stratum (Plot size: <u>5 ft</u>)	0 =	= Total Cover		regardless of height.				
1 Carex frankii	40	✓ 50.0%	OBL	Sapling/shrub stratum – Consists of woody plants, excluding				
2 Persicaria maculosa	15	✔ 18.8%	FACW	Herb stratum – Consists of all herbaceous (non-woody) plants.				
3 Mentha arvensis	10	12.5%	FACW	regardless of size, and all other plants less than 3.28 ft tall.				
Conoclinium coelestinum	5	6.3%	FAC	Woody vines – Consists of all woody vines greater than 3.28 ft				
5 Festuca arundinacea	10	12.5%	FACU	in height.				
6	0	0.0%		Fire Verstetien Churcher				
7	0	0.0%						
8	0	0.0%		Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in				
9	0	0.0%		diameter at breast height (DBH).				
10	0	0.0%		Sapling stratum – Consists of woody plants, excluding woody				
11	0	0.0%		than 3 in. (7.6 cm) DBH.				
12	0	0.0%		Shrub stratum – Consists of woody plants, excluding woody				
	80 =	= Total Cover		vines, approximately 3 to 20 ft (1 to 6 m) in height.				
		0.0%		herb stratum – Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody				
1				species, except woody vines, less than approximately 3 ft (1				
2	0							
3	<u> </u>			woody vines – Consists of all woody vines, regardless of height.				
4	<u> </u>							
5	0			Hydrophytic				
6	0	□ 0.0%		Vegetation Present? Yes I No				
	0	= Total Cover	r					
Remarks: (Include photo numbers here or on a senarate shee	at)							

e pl sepa eet.)

Wetland is a PEM dominated by hydrophytic herbaceous species.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS. US Army Corps of Engineers

Color (moist) % Color (moist) % Type Loc2 Texture Remarks D-6 10YR 3/2 95 10YR 4/6 5 C PL Silty Clay D-6 10YR 3/2 95 10YR 4/6 5 C PL Silty Clay D-6 10YR 3/2 95 10YR 4/6 5 C PL Silty Clay D-6 10YR 3/2 95 10YR 4/6 5 C PL Silty Clay D-6 10YR 3/2 95 10YR 4/6 5 C PL Silty Clay D-6 10YR 10	Depth Matrix	Redox Features	
0-6 10YR 3/2 95 10YR 4/6 5 C PL Silty Clay 0-6 10YR 3/2 95 10YR 4/6 5 C PL Silty Clay 0-6 10YR 3/2 95 10YR 4/6 5 C PL Silty Clay 0-6 10YR 3/2 95 10YR 4/6 5 C PL Silty Clay 0-6 10YR 4/6 5 C PL Silty Clay 10 <th>(inches) Color (moist) %</th> <th>Color (moist)%Tvpe ¹L</th> <th>oc² Texture Remarks</th>	(inches) Color (moist) %	Color (moist)%Tvpe ¹ L	oc ² Texture Remarks
pe: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ² Location: PL=Pore Lining. M=Matrix ydric Soil Indicators: Indicators for Problematic Hydric Soils ³ : Histosol (A1) Dark Surface (S7) Histosol (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Ø Depleted Matrix (F3) Depleted Blow Dark Surface (F0) Pedmont Floodplain Soils (F19) Thick Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Muck Mineral (S1) (LRR N, MLRA 136) Umbric Surface (F12) (LRR N, MLRA 147, 148) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 147, 147) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Type: Bedrack Present? Yuff Soil Present? Yes No	0-6 10YR 3/2 95	10YR 4/6 5 C F	PL Silty Clay
me: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ² Location: PL=Pore Lining. M=Matrix Iric Soil Indicators: Indicators of Problematic Hydric Soils ³ : Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147,148) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Ø Depleted Matrix (F3) C m Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Matrix (F3) C mAuck (A12) Redox Depressions (F8) Sandy Muck Mineral (S1) (LRR N, MLRA 136) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) trictive Layer (if observed): Red Parent Material (F21) (MLRA 127, 147) trictive Layer (if observed): Fige: Bedrock Ype: Bedrok Times': 6			
we: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ² Location: PL=Pore Lining. M=Matrix dric Soil Indicators: Indicators: Indicators: Indicators: Histosol (A1) Dark Surface (S7) Indicators: Histosol (A2) Polyvalue Below Surface (S8) (MLRA 147,148) 2 cm Muck (A10) (MLRA 147) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Coast Prairie Redox (A16) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (MLRA 147, 148) Stratified Layers (A5) V Depleted Matrix (F3) Piedmont Floodplain Soils (F19) (MLRA 147, 148) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Very Shallow Dark Surface (TF12) Depleted Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Other (Explain in Remarks) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. trictive Layer (if observed): Type: Bedrock Yes No			
we: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ² Location: PL=Pore Lining. M=Matrix dric Soil Indicators:			
Histosol (A1) Dark Surface (S7) Histosol (A2) Polyvalue Below Surface (S8) (MLRA 147,148) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Depleted Matrix (F3) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Muck Mineral (S1) (LRR N, MLRA 147, 148) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Attrictive Layer (If Observed): Type: _Bedrock Type: _Bedrock Perth (inches): 6	pe: C=Concentration. D=Depletion. RM=F	educed Matrix, CS=Covered or Coated Sand Grains	² Location: PL=Pore Lining. M=Matrix
Depth (inches): 6 Hydric Soil Present? Yes V No	ydric 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 Muck Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) strictive Layer (if observed): Type: Bedrock	 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 (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 144 Red Parent Material (F21) (MLRA 127, 147 	Indicators for Problematic Hydric Soils ³ : 148) 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) 18) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

 Log in (b)

 Search Locations

 Log in (b)
 Log in (b)

 Knoxville, TN 81 °F Parity Cloudy/(weather/us/tn/knoxville/35.93,-84.05)
 Mt. Juliet, TN 79 °F Mostly Cloudy/(weather/us/tn/mt.juliet/36.17,-86.51)
 Recent Cities Cleveland, TN (weather/us/tn/cleveland/35.17,-84.89)
 Whitter, NC (28789) (weather/us/tn/whitter

 Webcam hosting service will be discontinued on October 21, 2021. Read more about our decision here. (https://support.weather.com/s/article/Webcam-hosting-service-is-discontinued-effective-October-21-2021).

Elev 745 ft, 35.73 °N, 86.94 °W

MyWeatherStation - KTNSPRIN164 50

FORECAST FOR SPRING HILL, TN (/WEATHER/US/TN/SPRING-HILL/KTNSPRIN164)





THERE IS NO ASSOCIATED WEBCAM WITH THIS STATION

Weather History for KTNSPRIN164

	Monthly Mode	October	2021	View		Next
Previous						
Summary						
October 1, 2021 - October 31, 2021						
	High	Lo	N		Average	
Temperature	89.4 °F	57.	7 °F		71.0 °F	
Dew Point	72.5 °F	56.	8 °F		65.0 °F	
Humidity	97 %	38	%		83 %	
Precipitation	2.10 in	-			-	
	High	Lo	N		Average	
Wind Speed	13.1 mph	0.0	mph		1.4 mph	
Wind Gust	16.3 mph				1.5 mph	
Wind Direction	-	-			South	
Pressure	30.03 in	29.	68 in		-	

Graph Table

October 1, 2021 - October 31, 2021

	Temperat	ure		Dew Point	t		Humidi	y		Speed			Pressure		Precip. Accum.
Date	High	Avg	Low	High	Avg	Low	High	Avg	Low	High	Avg	Low	High	Low	Sum
10/1/2021	89.4 °F	75.0 °F	65.3 °F	70.8 °F	66.0 °F	59.9 °F	96 %	77 %	38 %	8.2 mph	0.7 mph	0.0 mph	30.03 in	29.97 in	0.00 in
10/2/2021	81.3 °F	70.3 °F	61.8 °F	70.3 °F	65.2 °F	60.8 °F	97 %	85 %	60 %	13.1 mph	1.3 mph	0.0 mph	30.03 in	29.91 in	0.47 in
10/3/2021	80.7 °F	71.5 °F	67.1 °F	71.2 °F	68.2 °F	66.2 °F	97 %	90 %	66 %	9.6 mph	1.5 mph	0.0 mph	29.91 in	29.76 in	0.29 in
10/4/2021	83.8 °F	70.7 °F	62.9 °F	69.2 °F	65.0 °F	59.0 °F	97 %	84 %	45 %	7.1 mph	0.9 mph	0.0 mph	29.88 in	29.79 in	0.00 in
10/5/2021	75.9 °F	67.1 °F	59.7 °F	69.2 °F	64.4 °F	58.8 °F	97 %	92 %	73 %	11.1 mph	1.6 mph	0.0 mph	29.94 in	29.85 in	1.10 in
10/6/2021	78.2 °F	68.8 °F	62.2 °F	71.0 °F	65.5 °F	60.8 °F	97 %	90 %	72 %	9.6 mph	3.0 mph	0.0 mph	30.00 in	29.88 in	0.17 in
10/7/2021	82.5 °F	69.4 °F	60.8 °F	70.3 °F	64.8 °F	59.7 °F	97 %	86 %	54 %	6.7 mph	1.1 mph	0.0 mph	30.00 in	29.88 in	0.01 in
10/8/2021	82.9 °F	68.6 °F	57.7 °F	68.0 °F	61.8 °F	56.8 °F	97 %	81 %	49 %	8.9 mph	1.1 mph	0.0 mph	29.97 in	29.88 in	0.00 in
10/9/2021	88.5 °F	71.8 °F	59.3 °F	68.7 °F	63.1 °F	58.4 °F	97 %	77 %	43 %	8.9 mph	1.0 mph	0.0 mph	29.94 in	29.82 in	0.00 in
10/10/2021	88.3 °F	73.3 °F	60.4 °F	68.7 °F	64.6 °F	59.3 °F	97 %	77 %	46 %	9.3 mph	1.2 mph	0.0 mph	29.88 in	29.76 in	0.00 in
10/11/2021	83.4 °F	72.4 °F	62.2 °F	67.4 °F	64.1 °F	61.1 °F	96 %	77 %	49 %	12.5 mph	2.6 mph	0.0 mph	29.82 in	29.68 in	0.00 in
10/12/2021	83.8 °F	71.9 °F	61.1 °F	69.8 °F	64.8 °F	59.7 °F	96 %	80 %	48 %	8.9 mph	1.7 mph	0.0 mph	29.91 in	29.76 in	0.00 in
10/13/2021	86.1 °F	72.6 °F	61.3 °F	71.7 °F	66.3 °F	59.9 °F	96 %	82 %	55 %	9.3 mph	1.1 mph	0.0 mph	29.91 in	29.82 in	0.00 in
10/14/2021	86.1 °F	72.9 °F	63.3 °F	70.1 °F	65.0 °F	62.0 °F	97 %	78 %	46 %	8.9 mph	0.8 mph	0.0 mph	29.91 in	29.79 in	0.00 in
10/15/2021	80.7 °F	68.8 °F	63.3 °F	72.5 °F	65.5 °F	61.8 °F	95 %	90 %	71 %	8.9 mph	1.3 mph	0.0 mph	29.82 in	29.76 in	0.06 in

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Careers (http://ibm.biz/BdH3av)

PWS Network (/pws/overview)



STEORPS OF ENGL	Figure and tables made by the Antecedent Precipitation Tool
	Version 1.0
8	Written by Jason Deters

U.S. Army Corps of Engineers

Drought Index (PDSI)

WebWIMP H₂O Balance

Extreme wetness (2021-09)

Wet Season

2021-08-14

Result

2.879134

4.223622

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
FRANKLIN SEWAGE PLT	35.9417, -86.8686	654.856	15.276	27.264	7.291	11293	87
NEAPOLIS RES & EDU STN	35.7197, -86.9653	700.131	3.096	18.011	1.449	43	0
SPRING HILL 2.8 ENE	35.7593, -86.8783	741.142	3.072	59.022	1.564	7	0
THOMPSON STN	35.7636, -86.9322	774.934	3.05	92.814	1.655	7	0
SPRING HILL 3.2 NE	35.7779, -86.8881	771.982	3.978	89.862	2.148	3	3

Dry

1.69685

20	21	2022 2022	
ondition Value	Month Weight	Produc	t
3	3	(3
3	2	(5

5	I	Ÿ
1	1	1
		Wetter than Normal - 16