



March 30, 2022

Tennessee Department of Environment and Conservation
Division of Water Resources – Nashville Environmental Field Office
711 R.S. Gass Boulevard
Nashville, Tennessee 37216

Subject: Hydrologic Determination
Bellamy Property
Clarksville, Montgomery County, Tennessee
Latitude 36.609700° North and Longitude -87.242000° West
Project No. 3619-001-30

To Whom it May Concern:


Spectrum Environmental, Inc. (Spectrum) was contracted by Provident Realty Advisors to perform a Hydrologic Determination of the potential watercourses at the proposed Bellamy Property project in Clarksville, Montgomery County, Tennessee.

This report is submitted with the knowledge of the property owner and the prospective developer. The purpose of this report is to obtain TDEC's concurrence with this hydrologic determination to inform site planning for a proposed development on the property. The following information details the completed efforts in evaluating the subject site for the presence and types of potentially jurisdictional waters present within the property boundary.

We attest that all information submitted herein and in the accompanying attachments is true, accurate, and complete. We appreciate your review of this information and request your concurrence of our jurisdictional determinations. Should your review necessitate a site visit or should you have any questions or need additional information, please feel free to contact Kari Kennel at (901) 831-3565 (kkennel@specenviro.com).

Sincerely,
SPECTRUM ENVIRONMENTAL, INC.


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Staff Scientist


Marian R. Rubin, QHP-IT
Nashville Division Manager
Natural Resource Biologist

Enclosure – HD Evaluation Report

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Hydrologic Determination

**Bellamy Property
Clarksville, Montgomery County, Tennessee**

Applicant:

Provident Realty Advisors
10210 N. Central Expressway, Suite 300
Dallas, TX 75231

Report Issuance Date: March 30, 2022

Spectrum Project Number:
3619-001-30

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ACRONYMS

DWR	Division of Water Resources
EPA	Environmental Protection Agency
HD	Hydrologic Determination
LF	Linear Feet
NEFO	Nashville Environmental Field Office
NWI	National Wetland Inventory
NRCS	The National Resources Conservation Service
OHWM	Ordinary High Water Mark
Project Area	±205-acre tract in Clarksville, Montgomery County, Tennessee
Spectrum	Spectrum Environmental, Inc.
TCA	Tennessee Code Annotated
TDEC	Tennessee Department of Environment and Conservation
UDF	Upland Drainage Feature
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WSS	Web Soil Survey
WWC	Wet Weather Conveyance

1.0 EXECUTIVE SUMMARY

Spectrum Environmental, Inc. (Spectrum) was contracted by Provident Realty Group to perform a Hydrologic Determination (HD) within an area encompassing ± 205 -acres in Clarksville, Montgomery County, Tennessee (Project Area). The Project proponent's information is as follows:

Provident Realty Advisors
Attn: Dorothy Parks
10210 N. Central Expressway, Suite 300
Dallas, Texas 75231
DParks@providentrealty.net

In compliance with the Tennessee Code Annotated (TCA), Section 69-3-105, this report contains a delineation of resources that, in Spectrum's opinion, potentially fall or do not fall under the jurisdiction of the Tennessee Department of Environment and Conservation (TDEC). The desktop review and field delineation were performed by Spectrum Biologists on September 14, November 8, and November 15, 2021, in which potentially jurisdictional hydrologic features within the Project Area were characterized.

Based on Spectrum's current desktop evaluation and subsequent field survey, it is our determination that the site contains four (4) wetlands and three (3) ponds which, in our opinion, would be considered jurisdictional under the authority of TDEC. The site also contains seven (7) wet weather conveyances, four (4) upland drainage features, and one (1) pond, which in Spectrum's opinion, would not be considered jurisdictional under the authority of TDEC.

Subsequent to the completion of the field evaluation, it was determined that Spectrum should request an HD from TDEC – Nashville Environmental Field Office (NEFO).

END OF SECTION

2.0 INTRODUCTION

Spectrum was contracted by Provident Realty Group to perform a delineation of HD features for a ±205-acre tract of land located in Clarksville, Montgomery County, Tennessee.

The property is currently owned by:

Owner 1: Janice Bellamy

Owner 2: David Bellamy

Address: 4051 Guthrie Highway
Clarksville, TN 37040

Written permission from the current landowner granting TDEC's staff to access the property in order to perform site visits to verify the jurisdictional status of HD features is provided in Appendix A.

Spectrum personnel (Marian Rubin and Kari Kennel) conducted field investigations within the Project Area on September 13, November 8, and November 15, 2021, to determine:

- If potential jurisdictional HD features sites exist within the Project Area; and
- Approximate boundaries of potential jurisdictional and non-jurisdictional HD features within the project area, if present.

This report contains a delineation of HD resources that potentially fall under the jurisdiction of TDEC. The findings of the HD Evaluation are summarized in this report.

END OF SECTION

3.0 PROJECT LOCATION AND DESCRIPTION

Spectrum performed a jurisdictional determination of a ± 205 -acre site located at 4175 Guthrie Highway in Clarksville, Montgomery County, Tennessee. The Project Area is located south of Guthrie Highway and west of Hampton Station Road. The parcels assessed are identified as 016 00701 000, 016 00700 000, 015 04200 000, and 015 04201 000. The Project Area is centered at Latitude 36.609700° North and Longitude -87.242000° West (Figure 1). The Project Area is located in the Spring Creek watershed (HUC12-051302060603), which is part of the Red River (HUC8-05130206) watershed.

3.1 Land Use and Current/Adjacent Site Conditions

Currently, the Project Area is primarily agricultural farmland and partially forested. The site conditions of the Project Area include agricultural fields, wooded areas, and surface water features. The property was historically utilized as agricultural land. The adjacent site conditions include residential, commercial, and agricultural land uses.

According to the United States Department of Agriculture (USDA) Drought Monitor, the Project Area was experiencing normal conditions during the time of site reconnaissance. According to data obtained from Weather Underground, the closest weather station (KTNCLARK126) site received zero inches of precipitation within 48 hours prior to each day of site reconnaissance (September 13, November 8, and November 15, 2021) (Table 3.1-1).

Table 3.1-1 – Rainfall Data

Date	9/6	9/7	9/8	9/9	9/10	9/11	9/12	9/13
KTNCLARK126	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00

Date	11/1	11/2	11/3	11/4	11/5	11/6	11/7	11/8
KTNCLARK126	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00

Date	11/8	11/9	11/10	11/11	11/12	11/13	11/14	11/15
KTNCLARK126	0.00	0.00	0.00	0.34	0.00	0.00	0.00	0.00

Based on the TDEC – Division of Water Resources (DWR) Hydrological Determination Guidance Document Version 1.5 April 2020, the Weather Conditions during the time of the site reconnaissance (September 13, November 8, and November 15, 2021) were determined to be wetter than normal (Table 3.1-2 and 3.1-3). Copies of the Normal Weather Condition calculations are included in Appendix B. This HD was conducted in accordance with the Rule that a one-inch

precipitation event in 24 hours did not occur in the area of investigation within the previous 48 hours [0400-40-03-.05(9)].

Table 3.1-2 – Calculation of Normal Weather Conditions for Months Prior to September

	Month	Std. Dev.	Minus one Std. Dev (DRY)	Normal (Mean inches)	Plus One Std. Dev. (WET)	Actual Rainfall*	Condition	Condition Value	Month Weight Value	Product of previous two columns
1 st Month Prior	Aug-21	2.03	1.27	3.3	5.33	7.62	Wet	3	3	9
2nd Month Prior	Jul-21	1.82	2.03	3.85	5.67	6.25	Wet	3	2	6
3rd Month Prior	Jun-21	2.22	1.75	3.97	6.19	6.26	Wet	3	1	3
									Sum =	18

If sum is:		Condition Value:
6-9	then prior period has been drier than normal	Dry = 1
10-14	then prior period has been normal	Normal = 2
15-18	then prior period has been wetter than normal	Wet = 3

Conclusions:
Actual rainfall obtained from weather underground station KTNCLARK126 (WU73)
Monthly precipitation standard deviation and mean sourced from NOAA PSL - Clarksville (1991-2020)
Weather conditions prior to this period have been wetter than normal.

Table 3.1-3 – Calculation of Normal Weather Conditions for Months Prior to November

	Month	Std. Dev.	Minus one Std. Dev (DRY)	Normal (Mean inches)	Plus One Std. Dev. (WET)	Actual Rainfall*	Condition	Condition Value	Month Weight Value	Product of previous two columns
1 st Month Prior	Oct-21	1.56	1.27	2.83	4.39	5.43	Wet	3	3	9
2nd Month Prior	Sep-21	1.98	1.21	3.19	5.17	2.74	Normal	2	2	4
3rd Month Prior	Aug-21	2.03	1.27	3.3	5.33	7.62	Wet	3	1	3
									Sum =	16

If sum is:		Condition Value:	
6-9	then prior period has been drier than normal	Dry =	1
10-14	then prior period has been normal	Normal =	2
15-18	then prior period has been wetter than normal	Wet =	3

Conclusions:
Actual rainfall obtained from weather underground station KTNCLARK126 (WU73)
Monthly precipitation standard deviation and mean sourced from NOAA PSL - Clarksville (1991-2020)
Weather conditions prior to this period have been wetter than normal.

3.2 *Site Topography, Ecoregion, Soils, and Geology*

To help evaluate these physical features, Spectrum reviewed the National Wetland Inventory (NWI) Map for the site. The NWI map depicts one forested wetland on the southeastern portion of the property, one emergent wetland on the southwestern portion of the property, and two freshwater ponds within the survey area. The Survey Area is depicted on the USGS 7.5 Minute Hopkinsville Topographic Map. The site topography reflects a watershed trending toward the northeastern portion of the Project Area.

The Project Area is located in the Western Pennyroyal Karst region (71e) of the Level IV Ecoregion of the Level III Interior Plateau Ecoregion (71). Western Pennyroyal Karst region is described as being a flatter area of irregular plains, with fewer perennial streams, compared to the open hills of the Western Highland Rim (71f). Small sinkholes and depressions are common. The productive soils of this notable agricultural area are formed mostly from a thin loess mantle over residuum of Mississippian-age limestones. Most of the region is cultivated or in pasture; tobacco and livestock are the principal agricultural products, with some corn, soybeans, and small grains. The natural vegetation consisted of oak-hickory forest with mosaics of bluestem prairie. The barrens of Kentucky that extended south into Stewart, Montgomery, and Robertson counties, were once some of the largest natural grasslands in Tennessee (Griffith et al).

Spectrum utilized the NRCS web soil survey to identify the soils present within the Survey Area. Two hydric soils were identified within the Project Area, Guthrie silt loam and Lindell silt loam. In summary the soils present within the Project Area belong to the:

Montgomery County Soils

1. *Arrington Silt loam, 0 to 2 percent slopes*

Arrington Silt Loam is found on the base slope of floodplains. These soils are formed from silty alluvium derived from limestone and siltstone. A typical profile consists of silt loam. These soils are deep, well-drained, and have a moderately high permeability rate. Depth to restrictive feature is more than eighty inches and depth to the water table is more than 80 inches. This soil is classified as prime farmland. There is no hydric soil rating for this soil.

2. *Cumberland silty clay loam, 5 to 12 percent slopes*

Cumberland silty clay loam is found on the side slope of hillslopes. These soils are formed from clayey alluvium derived from limestone. A typical profile consists of silty clay loam and clay. These soils are deep, well-drained, and have a moderately high permeability rate. The depth to the water table is more than eighty inches. This soil is not classified as prime farmland. There is no hydric soil rating for this soil.

3. *Cumberland soils, cherty variant, 10 to 25 percent slopes*

Cumberland soils are found on the side slopes. A typical profile consists of gravelly silty clay loam and gravelly clay. These soils are deep, well-drained, and have a moderately high permeability rate. Depth to restrictive feature and water table is more than eighty inches. This soil is not classified as prime farmland. There is no hydric soil rating for this soil.

4. *Dickson silt loam, 2 to 5 percent slopes*

Dickson silt loam is found on the crest of flats. These soils are formed from silty loess over clayey residuum weathered from cherty limestone over clayey residuum weathered from limestone or clayey residuum weathered from siltstone. A typical profile consists of silt loam, clay, and bedrock. These soils are 20 to 26 inches to fragipan and 69 to 79 inches to bedrock. These soils are moderately well-drained and have a very low to moderately high permeability rate. The depth to the water table is more than 12 to 26 inches. This soil is classified as prime farmland. There is no hydric soil rating for this soil.

5. *Guthrie silt loam, 0 to 2 percent slopes*

Guthrie silt loam is found on the base slope of depressions. These soils are formed from noncalcareous loess or silty alluvium. A typical profile consists of silt loam. These soils are 24 to 35 inches to fragipan. These soils are shallow, poorly drained, and have a very low to moderately high permeability rate. The depth of the water table is about zero inches. This soil is not classified as prime farmland. This soil is rated as hydric.

6. *Lindell silt loam, 0 to 2 percent slopes*

Lindell silt loam is found on the base slope of flood plains. These soils are formed from fine-loamy alluvium derived from limestone and siltstone. A typical profile consists of silt loam and silty clay loam. These soils are more than eighty inches to lithic bedrock. These soils are deep, moderately well-drained, and have a moderately high permeability rate. The depth to the water table is about 12 to 16 inches. This soil is classified as prime farmland. There is no hydric soil rating for this soil.

7. *Pembroke silt loam, 2 to 6 percent slopes*

Pembroke silt loam is found on the summit of ridges. These soils are formed from thin fine-silty noncalcareous loess over clayey residuum weathered from limestone. A typical profile consists of silt loam, silty clay loam, and silty clay. These soils are deep, well-drained, and have a moderately high permeability rate. The depth to the water table is more than eighty inches. This soil is classified as prime farmland. There is no hydric soil rating for this soil.

8. *Pembroke silt loam, 6 to 12 percent slopes*

Pembroke silt loam is found on the summit of ridges. These soils are formed from thin fine-silty noncalcareous loess over clayey residuum weathered from limestone. A typical profile consists of silt loam, silty clay loam, and silty clay. These soils are deep, well-drained, and have a moderately high permeability rate. The depth to the water table is more than eighty inches. This soil is not classified as prime farmland. There is no hydric soil rating for this soil.

The surface geology of the majority of the Survey Area is underlain by St. Genevieve Limestone. St. Genevieve Limestone contains gray limestone, which is slightly oolitic and cherty, and contains some green shale and fine-grained sandstone. The maximum preserved thickness of this formation is 70 feet (Greene et al. 2000).

END OF SECTION

4.0 ASSESSMENT METHODOLOGY

Spectrum personnel (Marian Rubin, QHP-IT, and Kari Kennel, QHP-IT) performed an HD Evaluation on September 13, November 8, and November 15, 2021, within the Project Area. During the site evaluations, Spectrum personnel observed landforms and characteristics within the Project Area boundary, as well as on adjacent properties to assist in describing representative vegetation and hydrology. The field delineation was performed in accordance with the guidelines established in the Field Guide for Wetland Delineation, 1987 Corps of Engineers Manual (Manual) as well as the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region: (Version 2.0) – November 2010 (USACE 2010). Under the delineation procedures in this manual, an area must exhibit characteristic wetland hydrology, hydric soils, and hydrophytic vegetation to be considered wetland vegetation was assigned an indicator status and was determined by using the National List of Plant Species That Occur in Wetlands: Eastern Mountains and Piedmont Region (Lichvar et al, 2014). Stream identification was performed using the TDEC Division of Water Pollution Controls' Guidance for Making Hydrologic Determinations, Version 1.5, April 2020.

4.1 Preliminary Desktop Evaluation

Spectrum personnel conducted a desktop review of the proposed Project Area and surrounding habitats to aid in determining impacts to HD features. Sources used to complete the review included:

- United States Geological Survey (USGS) Topo: Hopkinsville TN 7.5-minute topographic quadrangle – (Figure 2);
- United States Geological Survey (USGS): LiDAR - (Figure 3);
- Aerial Imagery and Infrared Imagery: World Imagery ArcGIS Online – (Figure 4);
- United States Fish and Wildlife Service (USFWS): National Wetland Inventory (NWI) Maps – (Figure 5);
- The National Resources Conservation Service (NRCS) Web Soil Project (WSS) – (Figure 6); and
- USGS Geological Map – (Figure 7).

This review allowed for preliminary identification of potential HD features and provided an understanding of the ecology, land use, and general physiography of the site.

4.2 Mapping

The locations of areas which, in the opinion of Spectrum, represent HD features were mapped in the field using a handheld Garmin GPS unit. The accuracy of the handheld unit is dependent on atmospheric conditions, canopy conditions, and satellite feeds. Wetland areas were flagged using

pink flagging only while stream segments were flagged with a combination of blue flagging and pink “Wetland Delineation” flagging.

4.3 *Feature Naming*

Delineated and geographically referenced data points were recorded as well as a number that corresponds with the feature type within the Project Area. For example, the first point record within the Project Area is labeled “WWC1” on data sheets and Figure 8a – 8d.

4.4 *Photographs*

Photographs are the visual documentation of site conditions as they existed during the field survey. The site reconnaissance photographs are provided in Appendix C. Additionally, a photo index map can be provided upon request in the form of a KML file.

END OF SECTION

5.0 RESULTS OF FINDINGS

5.1 Potentially Jurisdictional Waterbodies

Spectrum’s Biologist identified four (4) wetlands and three (3) ponds within the Project Area (Figures 8a – 8d). It is Spectrum’s opinion that these features meet the jurisdictional requirements under the authority of the TDEC, Tennessee Code Annotated (TCA), Section 69-3-105. The required HD Field Data Sheets are provided in Appendix D. Wetland Data Forms are provided in Appendix E. The features are identified in Table 5.1-1 below:

Table 5.1-1 – Potentially Jurisdictional Waterbodies

Site ID	Start Latitude/ Longitude	End Latitude/ Longitude	Total Mapped		Average Width at OHWM (ft)	Type of aquatic resource
			Linear Feet	Acres		
Wet A	36.608319, -87.244493	-	-	0.003	-	Linear Wetland
Wet B	36.605068, -87.24301	-	-	1.1	-	Fringe Wetland
Wet C	36.610939, -87.238732	-	-	0.17	-	Forested Wetland
Wet D	36.608188, -87.236491	-	-	6.84	-	Emergent/Forested Wetland
Pond 1	36.608184, -87.244351	-	-	0.18	-	Open Water Pond
Pond 3*	36.605454, -87.24337	-	-	0.70	-	Open Water Pond
Pond 4	36.607893, -87.237689	-	-	0.13	-	Open Water Pond

* Though we believe Pond 3 may be considered jurisdictional, we also believe this feature represents a problematic aspect of our delineation and may be found to be non-jurisdictional.

Wetland A (Wet A) is a linear wetland that extends 0.003 acres from the northern edge of Pond 1, acting as a pond outfall. The primary vegetation of Wet A includes Swamp smartweed (*Polygonum hydropiperoides*), Long spike trident (*Tridens strictus*), and Sawtooth blackberry (*Rubus argutus*). Hydrology indicators include saturation, surface water, high water table, and true aquatic plants. Wetland A soils were hydric having a matrix color of 10YR 6/1 with 15% redox concentrations of 7.5YR 5/6 and a hydric soil indicator of loamy a depleted matrix.

Wetland B (Wet B) is a fringe wetland of Pond 3 encompassing 1.1 acres of the southern and eastern edges of Pond 3. The primary vegetation of Wet B includes Jump seed (*Persicaria virginiana*) and slough sedge (*Carex obnupta*). Hydrology indicators include four inches of surface

water, saturation to pit depth, high water table, inundation visible on aerial imagery, true aquatic plants, hydrogen sulfide odor, and presence of reduced iron. Wetland B soils were hydric having a matrix color of 10YR 5/1 with 15% redox concentrations of 7.5YR 4/6 and a hydric soil indicator of loamy a depleted matrix.

Wetland C (Wet C) is a forested wetland encompassing 0.17 acres on the eastern portion of the Survey Area. Wet C receives runoff from WWC6 and WWC7. The primary vegetation of Wet C includes Oriental Lady's Thumb (*Polygonum cespitosum*), Marsh seed box (*Ludwigia palustris*), Pin Oak (*Quercus palustris*), Red Maple (*Acer rubrum*), Winged Elm (*Ulmus alata*), and Black Willow (*Salix nigra*). Hydrology indicators include drift deposits, inundation/saturation visible on aerial imagery, sparsely vegetated concave surface, and geomorphic position. Wetland C soils were hydric having a matrix color of 10YR 4/2 with 5-25% redox concentrations of 7.5YR 4/6 and a hydric soil indicator of loamy a depleted matrix.

Wetland D (Wet D) is an emergent/forested wetland located on the southeastern portion of the Survey Area and is approximately 6.84 acres. The primary vegetation of Wet D includes Japanese stilt grass (*Microstegium vimineum*), common rush (*Juncus*), Pawpaw (*Asimina triloba*), Red Maple (*Acer rubrum*), Sugar Berry (*Celtis laevigata*), and Pin Oak (*Quercus palustris*). Hydrology indicators saturation, standing water, inundation visible on aerial imagery, sparsely vegetated concave surface, moss trim lines, water-stained leaves, and crayfish burrows. Wetland C soils were hydric at:

- Data point Wet D1 having a matrix color of 10YR 5/2 with 10-15% redox concentrations of 7.5YR 4/6 and a hydric soil indicator of loamy a depleted matrix;
- Data point Wet D2 having a matrix color of 10YR 3/2 and 5/1 with 5-10% redox concentrations of 7.5YR 4/6 and a hydric soil indicator of loamy a depleted matrix; and
- Data point Wet D3 having a matrix color of 10YR 4/1 and 5/1 with 5-10% redox concentrations of 7.5YR 4/6 and a hydric soil indicator of loamy a depleted matrix;

Pond 1 is a man-made open water pond located on the western portion of the Survey Area. This pond is approximately 0.18 acres and receives runoff from WWC1 and Upland Drainage Feature 1 (UDF1). During heavy rain events, Pond 1 drains into Wet A. Historical aerials from 1954 show the earliest development of Pond 1. During the period around 1954, it is apparent two separate areas were excavated adjacent to each other. Between 1955 and 1981, the eastern excavation area was filled. By 1998, the area which had been filled had been restored and was now connected to the western excavated area to form one pond, Pond 1. This singular feature, similar to that depicted on the 1998 aerial, is what was observed during Spectrum's site visits.

Pond 3 is a man-made open water pond on the southwestern portion of the target property and is approximately 0.70 acres and is located near the northern edge of Wet B. This pond captures sheet flow from the surrounding agricultural fields during rain events and is influenced by the water level within Wet B. Additionally, Pond 3 drains into UDF2. Based on a review of historical aerials, Pond 3 was constructed by at least 1949. By 1955, the pond appears to have dried out, concentrating collected waters in a relatively small, central portion of the pond's footprint. Between 1955 and 1981, apparent site activities attempt to restore this pond. By 2006, the pond is extended south and appears to be similar to what was observed during our site evaluation. Though we believe Pond 3 may be considered jurisdictional, we also believe this feature represents a problematic aspect of our delineation and may be found to be non-jurisdictional.

Pond 4 is a man-made open water pond located within the westernmost bounds of Wet D. This pond is approximately 0.13 acres. Based on a review of historical aerials, the earliest presence of Pond 4 appears in 1981. During this time, the surrounding forested area was clear cut. By 1998, Pond 4 had been extended to a configuration and size similar to that observed during Spectrum's site visits.

5.2 Potentially Non-Jurisdictional Waterbodies

Spectrum's Biologist identified seven (7) wet weather conveyances, four (4) upland drainage features, and one (1) pond within the Project Area (Figures 8a – 8d). It is Spectrum's opinion that these features do not meet the jurisdictional requirements established by TDEC, TCA, Section 69-3-105. The features are identified in Table 5.2-1 below:

Table 5.2-1 – Potentially Non-Jurisdictional Waterbodies

Site ID	Start Latitude/ Longitude	End Latitude/ Longitude	Total Mapped		Average Width at OHWM (ft)	Type of aquatic resource
			Linear Feet	Acres		
WWC1	36.608101, -87.243955	36.608157, -87.244138	64	0.003	2	Wet Weather Conveyance
WWC2	36.608291, -87.244641	36.608213, -87.244746	42	0.002	2	Wet Weather Conveyance
WWC3	36.607174, -87.239405	36.615177, -87.240736	4,302	0.37	3.75	Wet Weather Conveyance
WWC4	36.615342, -87.241027	36.615269, -87.241133	105	0.01	3	Wet Weather Conveyance

Site ID	Start Latitude/ Longitude	End Latitude/ Longitude	Total Mapped		Average Width at OHWM (ft)	Type of aquatic resource
			Linear Feet	Acres		
WWC5	36.614951, -87.24202	36.61527, -87.241329	285*	0.01	2	Wet Weather Conveyance
WWC6	36.610847, -87.23905	36.61527, -87.241329	104	0.005	2	Wet Weather Conveyance
WWC7	36.611000, -87.238549	36.611055, -87.237833	217	0.01	2.5	Wet Weather Conveyance
UDF1	36.608062, -87.243809	36.608084, -87.243887	45**	-	-	Upland Drainage Feature
UDF2	36.605841, -87.243684	36.607436, -87.243994	617	-	-	Upland Drainage Feature
UDF3	36.610898, -87.239213	36.611002, -87.23942	72	-	-	Upland Drainage Feature
UDF4	36.611189, -87.239922	36.611548, -87.240527	247	-	-	Upland Drainage Feature
Pond 2	36.607258, -87.242035	-	-	0.18	-	Open Water Pond

*This length includes 50 LF of a previously piped section of WWC5

**This length includes 20 LF of a previously piped section of UDF1

WWC1 is a wet weather conveyance that originates at the culvert on the western portion of the property. This feature extends for 64 linear feet before terminating at the southeastern edge of Pond 1. WWC1 was dry during the field delineation and received a hydrologic determination score of 8.5.

WWC2 is a wet weather conveyance that begins at the terminus of Wet A, a linear wetland. WWC2 extends for 42 linear feet before flowing out of the Survey Area to the west. This feature appears to act as a pond outfall for Pond 1. This feature lacks a defined bed and bank and biological indicators and received a hydrologic determination score of 12.5.

WWC3 is a wet weather conveyance that transects the majority of the survey area from south to north. This feature begins at a culvert at the southern property boundary beneath the railroad. WWC3 extends for 4,301 linear feet, through forested areas and agricultural fields before turning into sheet flow on the northeastern portion of the Survey Area. The entirety of WWC3 was dry

during the field delineation. This reach was scored in four parts receiving hydrologic determination scores of 12.25, 8, 8.5, and 11, respectively.

WWC4 is a wet weather conveyance that begins along the northeastern property boundary. This feature extends for 105 linear feet until its confluence with WWC5 at the culvert beneath Guthrie Highway, which extends off property to the north. This feature lacks a defined bed and bank and was dry during the field evaluation. WWC4 received a hydrologic determination score of 13.25.

WWC5 is a wet weather conveyance beginning at the culvert beneath the residential gravel driveway off of Guthrie Highway. WWC5 extends for 285 feet until its confluence with WWC4 at the culvert beneath Guthrie Highway, which extends off property to the north. This feature has no defined bed and bank, and the vegetation was composed of upland plant species. WWC5 received a hydrologic determination score of 10.75.

WWC6 is a wet weather conveyance beginning where the channel of UDF3 becomes more apparent. This feature extends for 104 linear feet before terminating at the southwestern edge of Wet C. WWC6 was dry during the site evaluation and lacked a defined bed and bank. This feature received a hydrologic determination score of 11.

WWC7 is a wet weather conveyance beginning at a point on the eastern property boundary and extends for 217 feet before terminating at the eastern edge of Wet C. This feature was dry at the time of the field evaluation and received a hydrologic determination score of 16.5.

UDF1 extends for 45 linear feet and acts as a drainage feature for the surrounding agriculture field. UDF1 ends where WWC1 begins, and the channel becomes more apparent before entering Pond 1. Based on observations made in the field, UDF1 lacked bed and bank and other requisite characteristics and is constructed in an upland to drain an upland.

UDF2 extends for 617 feet south to north. UDF2 appears to act as a pond outfall for Pond 3. During the field evaluation, UDF2 was observed to be a grassy swale. Based on observations made in the field, UDF2 lacked bed and bank and other requisite characteristics and is constructed in an upland to drain an upland.

UDF3 extends for 72 feet and is a drainage feature in the upland for the surrounding agricultural field. UDF3 ends where WWC6 begins, and the bed and bank become more apparent. Based on observations made in the field, UDF3 lacked bed and bank and other requisite characteristics and is constructed in an upland to drain an upland.

UDF4 extends for 247 feet and is an upland drainage feature for the surrounding agricultural field. This feature terminates at a confluence with WWC3. Based on observations made in the field, UDF4 lacked bed and bank and other requisite characteristics and is constructed in an upland to drain an upland.

Pond 2 is a man-made open water pond located in the central portion of the Survey Area and is approximately 0.18 acres. This pond captures sheet flow from the surrounding agricultural fields. Historical aerials from 1949 show the initial stages of Pond 2 development. Between 1955 and 1981, Pond 2 appears to be dry. By 1998, Pond 2 exhibits similar physical characteristics as those observed during the site evaluation. In our opinion, Pond 2 received inflow only from surface sheet flow, therefore should not be considered a jurisdictional Water of the State.

END OF SECTION

6.0 CONCLUSION

The Project Area contains 8.11 acres of wetland and 1.01 acres of open water pond which, in Spectrum's opinion, would be considered jurisdictional Waters of the State under the authority of the TDEC.

The Project Area also contains 5,119 LF (0.41 acres) of wet weather conveyance, 981 LF of upland drainage features, and 0.18 acres of open water pond which, in Spectrum's opinion, would not be considered jurisdictional Waters of the State under the TDEC.

END OF SECTION

7.0 REFERENCES

Greene, D.C., and Wolfe, W.J., 2000, Superfund GIS - 1:250,000 Geology of Tennessee, USGS, (geo250k).

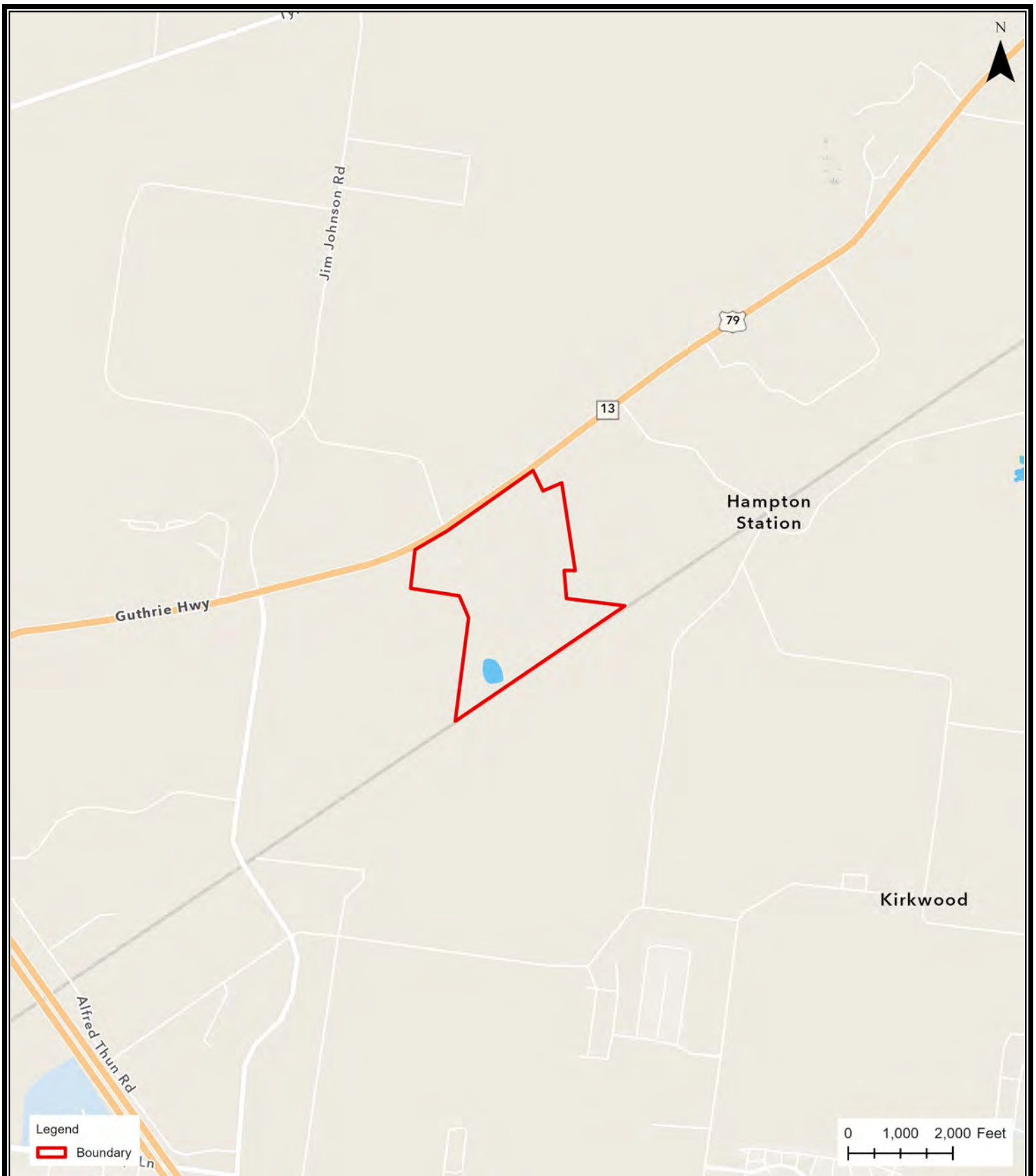
Griffith, G.E., Omernik, J.M., and Azevedo, S., 2001, Ecoregions of Tennessee, (color poster with map, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (map scale 1:1,700,000).

Hardeman, W.D., Miller, R.A., and Swingle, G.D., 1966, Geologic Map of Tennessee: Division of Geology, Tennessee Department of Environment and Conservation, 4 sheets, scale 1:250,000

United States Fish and Wildlife Service (USFWS). December 2002. National Wetlands Inventory website. United States Department of the Interior, Fish and Wildlife Service, St. Petersburg, FL. <http://www.nwi.fws.gov>. Accessed January 2021.

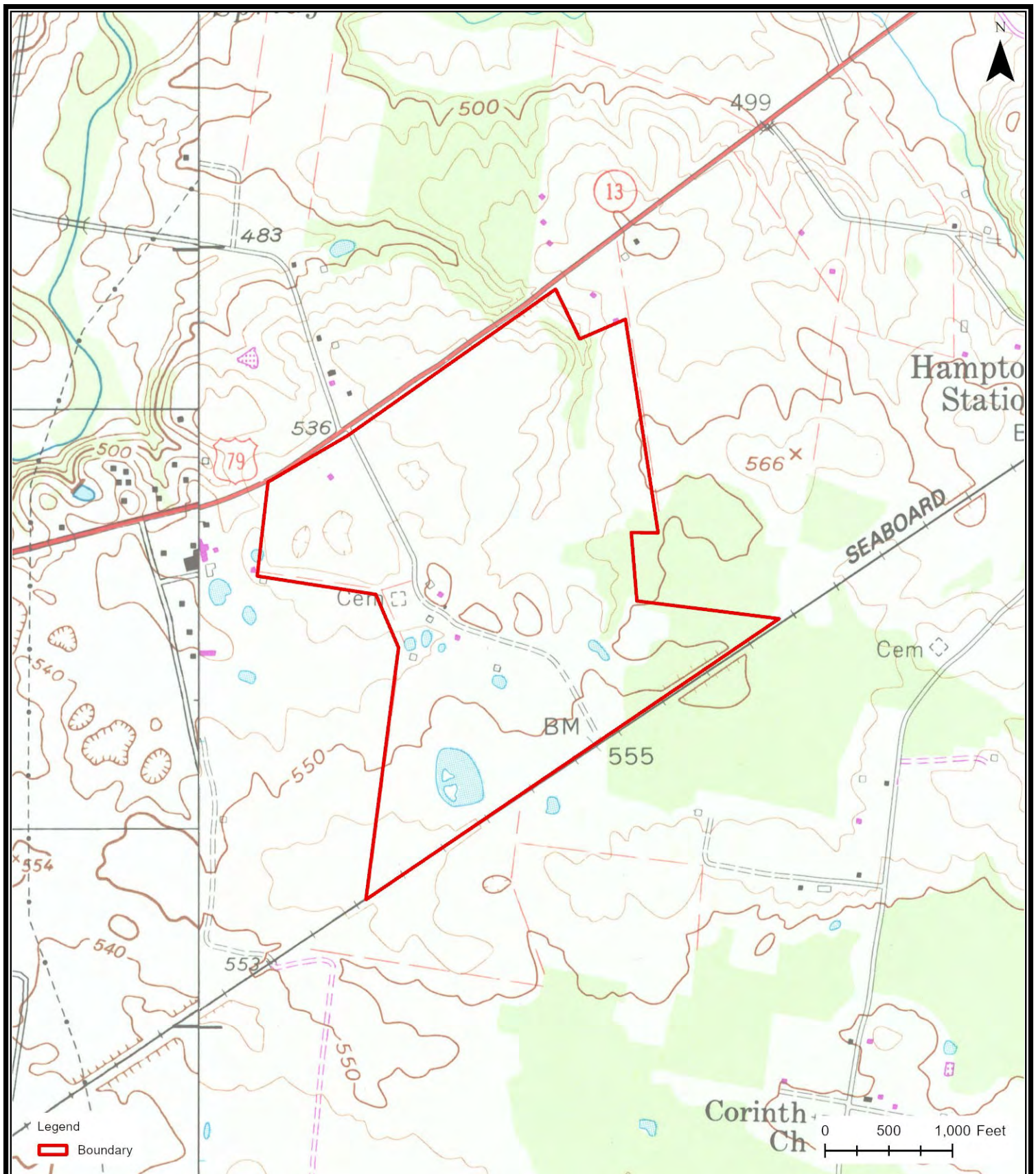
Wetland Training Institute, Inc. 1995. Field Guide for Wetland Delineation; 1987 Corps of Engineers Manual. Poolesville, Maryland. WTI 95-3.

FIGURES



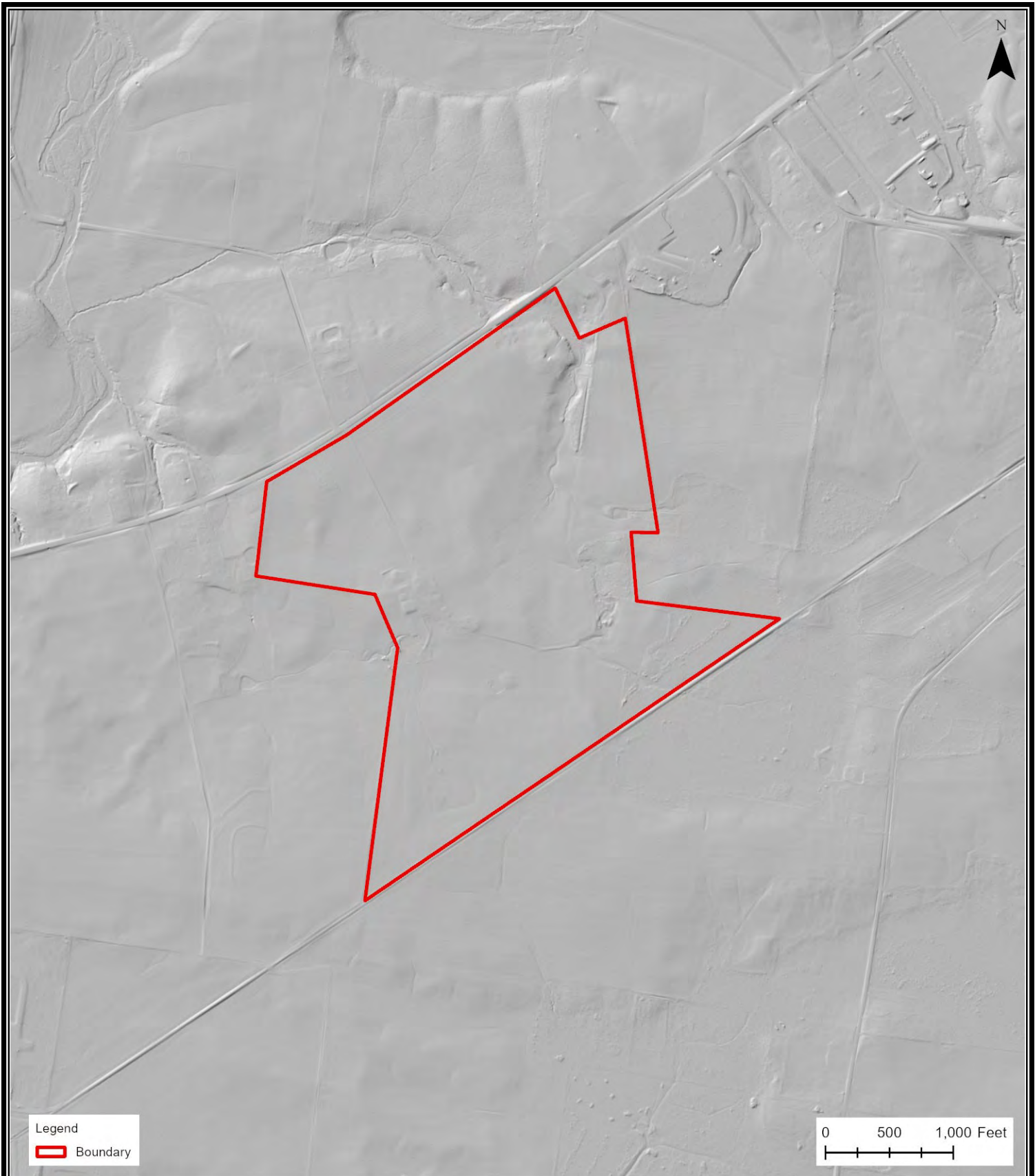
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				Drawn By:	Client #:	<div> <div> 901 Woodland Street Suite 104 Nashville, TN 37206 P - 615-469-4941 </div> <div> 85 Spectrum Cove Alabaster, AL 35007 O - 205-664-2000 F - 205-664-2142 </div> </div> <div>  SPECTRUM Solutions to Your Environmental Challenges </div>	
				KK	3619		
				Checked By:	Date:		
				AH	11/16/2021		
				Project Mgr.:	Project #:	TITLE Figure 1 — Site Location Map Hydrologic Determination Provident Realty Advisors Bellamy Property Clarksville, Montgomery County, Tennessee	
NO.	DATE	REVISION NOTE	BY	MR	3619-001-30		



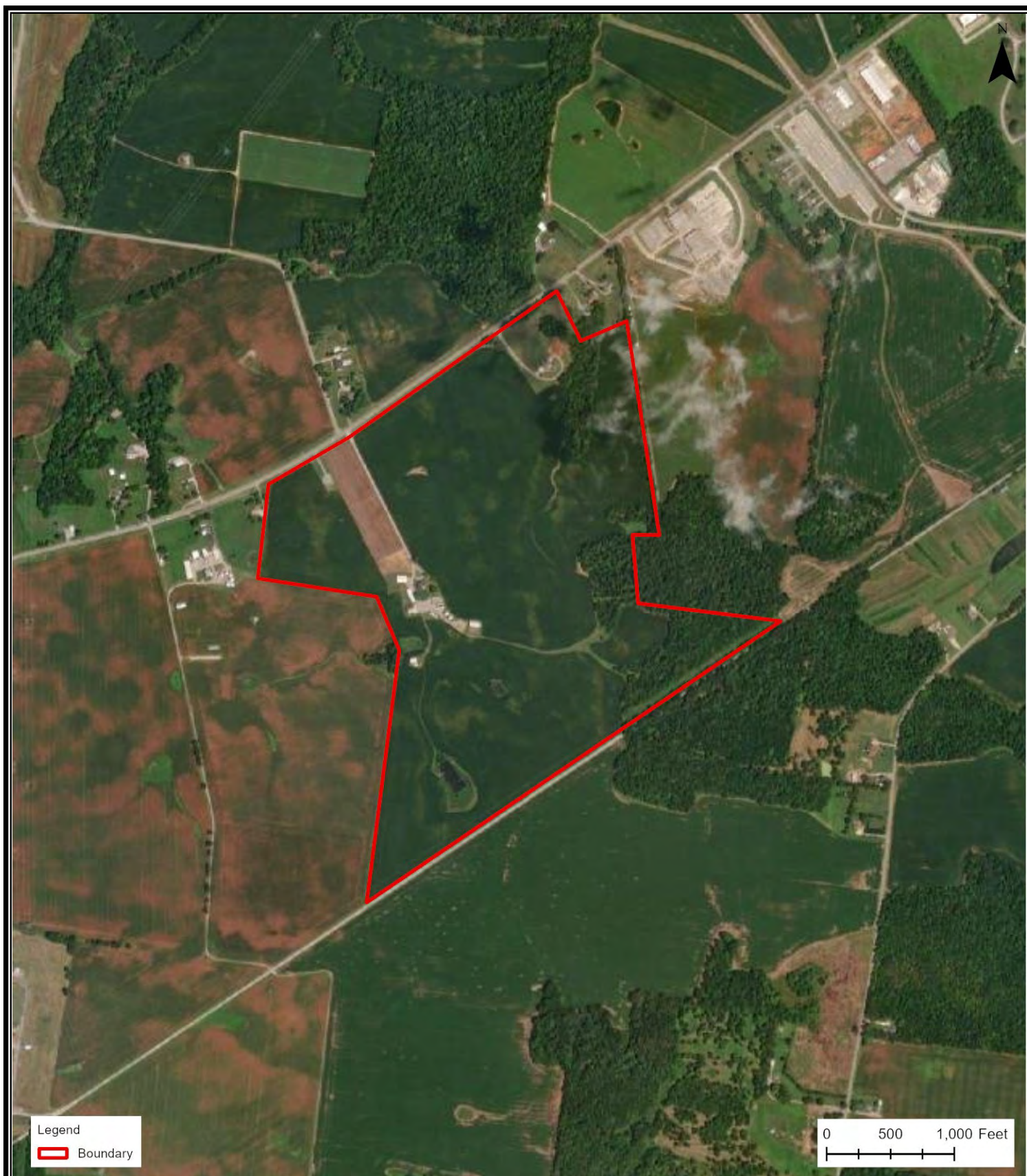
Source: Image courtesy of ESRI and USGS. USGS Hopkinsville, TN 7.5 minute quadrangle.

				Drawn By:	Client #:	<div><div>901 Woodland Street Suite 104 Nashville, TN 37206 P - 615-469-4941</div><div><div>SPECTRUM Solutions to Your Environmental Challenges</div></div></div> <div>85 Spectrum Cove Alabaster, AL 35007 O - 205-664-2000 F - 205-664-2142</div>	TITLE	
				Checked By:	Date:		Figure 2 — Site Topo Map Hydrologic Determination Provident Realty Advisors Bellamy Property Clarksville, Montgomery County, Tennessee	
				AH	11/16/2021			
				Project Mgr.:	Project #:			
NO.	DATE	REVISION NOTE	BY	MR	3619-001-30			



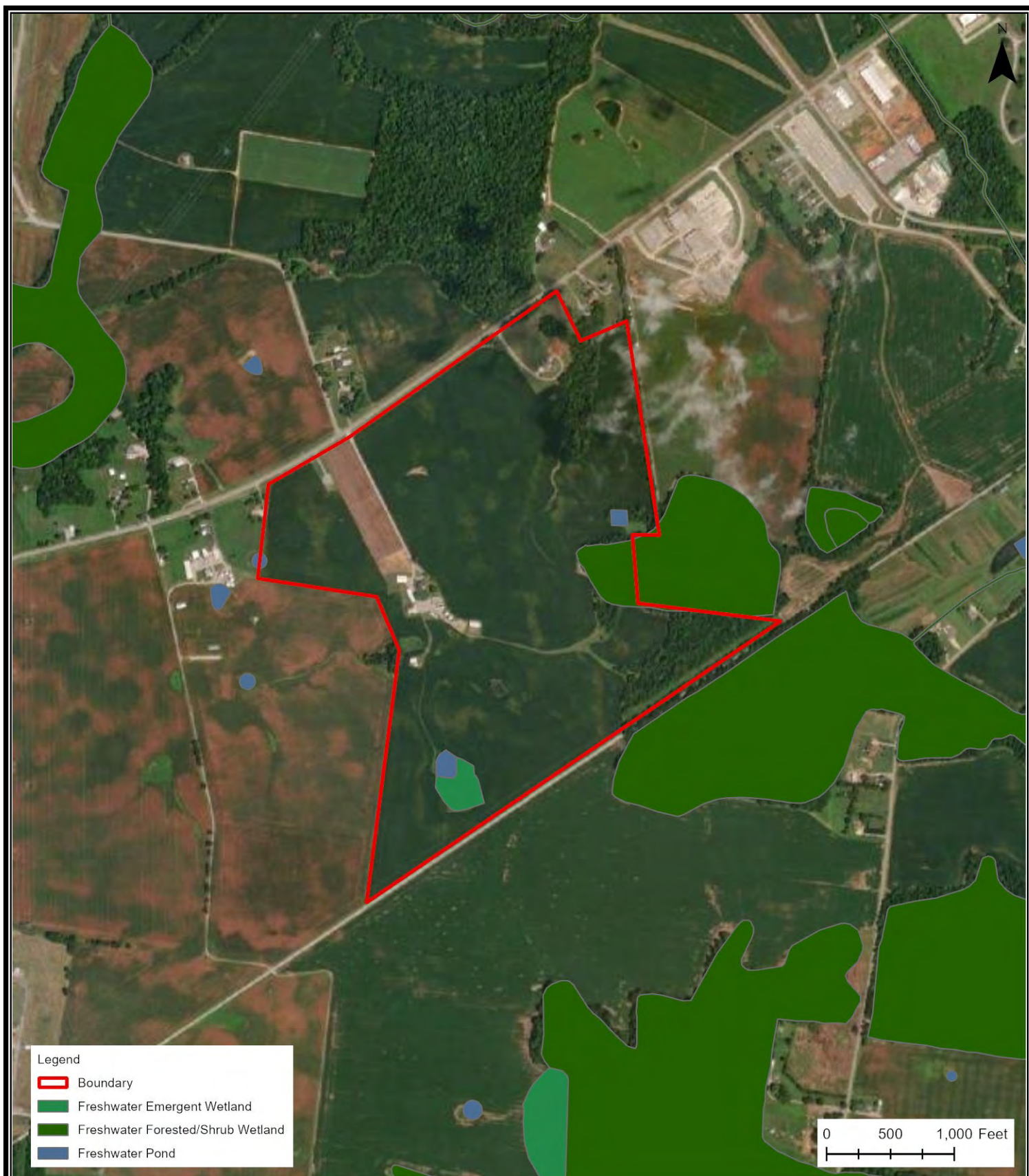
Source: Image courtesy of ESRI and USGS.

				Drawn By:	Client #:	<div><div>901 Woodland Street Suite 104 Nashville, TN 37206 P - 615-469-4941</div><div><div>85 Spectrum Cove Alabaster, AL 35007 O - 205-664-2000 F - 205-664-2142</div></div></div>	<div>TITLE</div> <div>Figure 3 — Site LiDAR Map Hydrologic Determination Provident Realty Advisors Bellamy Property Clarksville, Montgomery County, Tennessee</div>	
				Checked By:	Date:			
				AH	11/16/2021			
				Project Mgr.:	Project #:			
NO.	DATE	REVISION NOTE	BY	MR	3619-001-30			



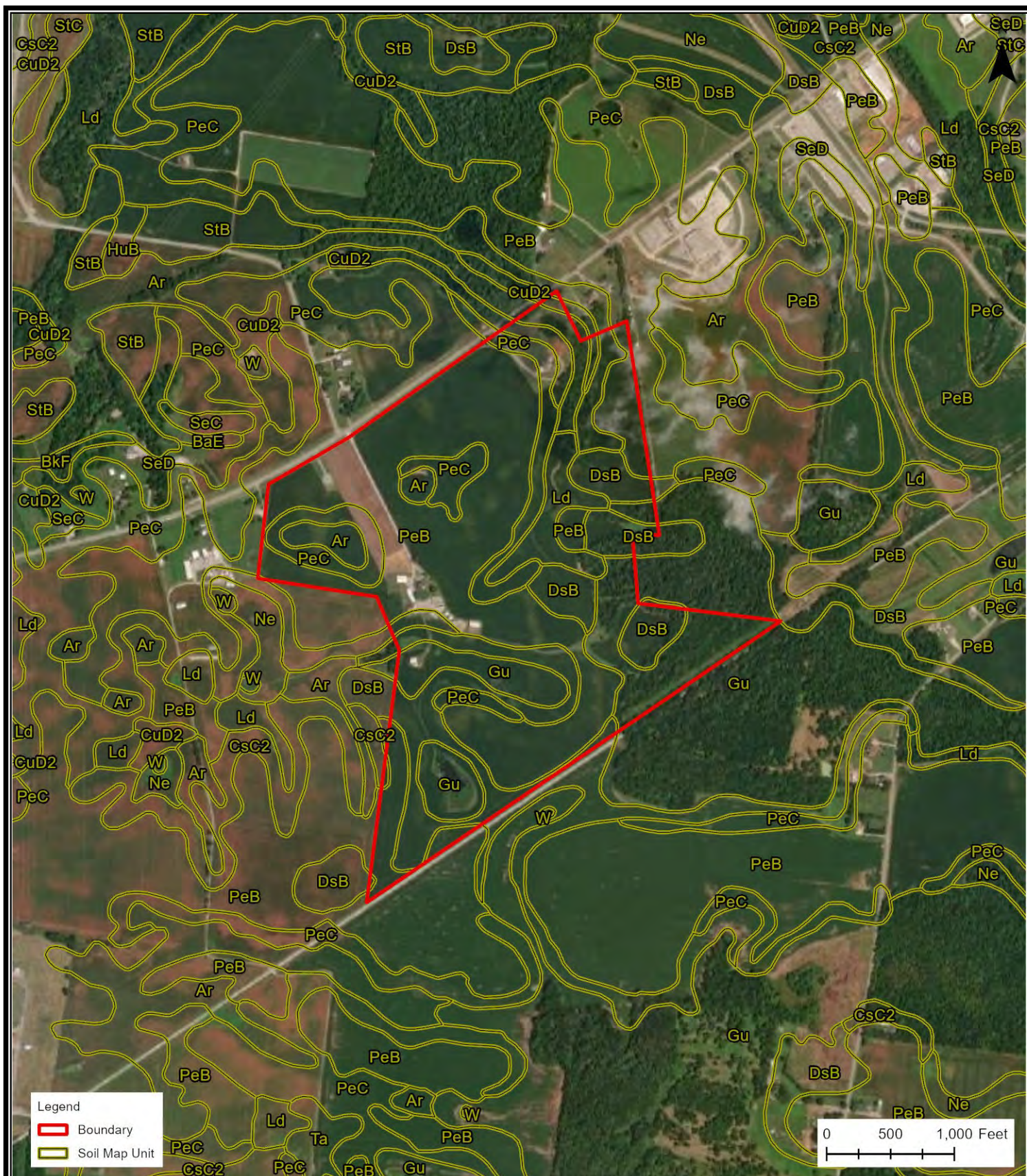
Source: Image courtesy of ESRI.

				Drawn By:	Client #:	<div><div>901 Woodland Street Suite 104 Nashville, TN 37206 P - 615-469-4941</div><div> SPECTRUM Solutions to Your Environmental Challenges</div><div>85 Spectrum Cove Alabaster, AL 35007 O - 205-664-2000 F - 205-664-2142</div></div>	<div>TITLE</div> <div>Figure 4 — Site Aerial Map Hydrologic Determination Provident Realty Advisors Bellamy Property Clarksville, Montgomery County, Tennessee</div>			
				KK	3619					
				Checked By:	Date:					
				AH	11/16/2021					
				Project Mgr.:	Project #:					
NO.	DATE	REVISION NOTE	BY	MR	3619-001-30					



Source: Image courtesy of ESRI and National Wetland Survey.

				Drawn By:	Client #:	<div> <div> 901 Woodland Street Suite 104 Nashville, TN 37206 P - 615-469-4941 </div> <div> 85 Spectrum Cove Alabaster, AL 35007 O - 205-664-2000 F - 205-664-2142 </div> </div> <div>  SPECTRUM Solutions to Your Environmental Challenges </div>	
				KK	3619		
				Checked By:	Date:		
				AH	11/16/2021		
				Project Mgr.:	Project #:	TITLE Figure 5 — NWI Map Hydrologic Determination Provident Realty Advisors Bellamy Property Clarksville, Montgomery County, Tennessee	
NO.	DATE	REVISION NOTE	BY	MR	3619-001-30		



Source: Image courtesy of ESRI and NRCS Web Soil Survey.

NO.	DATE	REVISION NOTE	BY

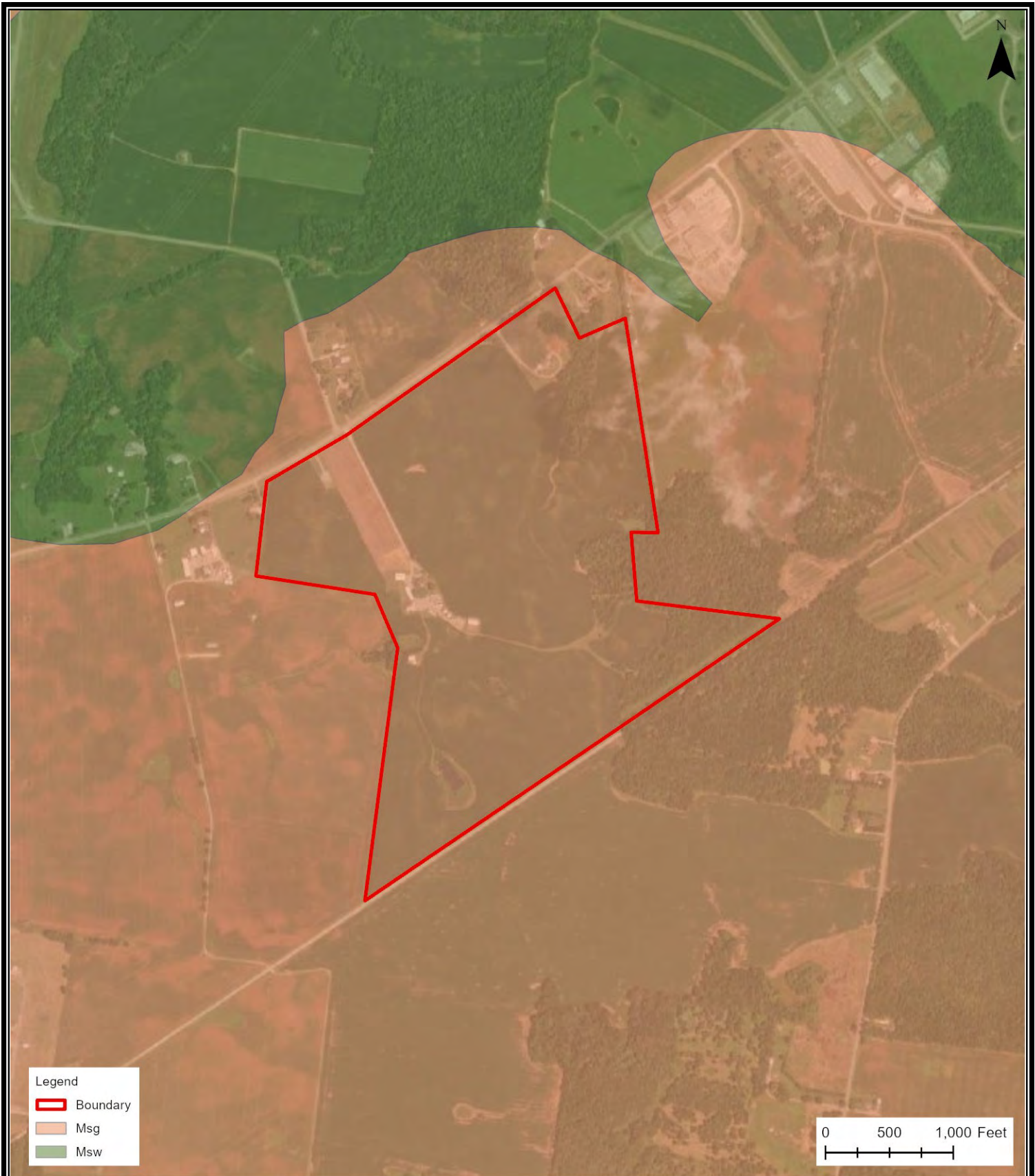
Drawn By:	Client #:
KK	3619
Checked By:	Date:
AH	11/16/2021
Project Mgr.:	Project #:
MR	3619-001-30

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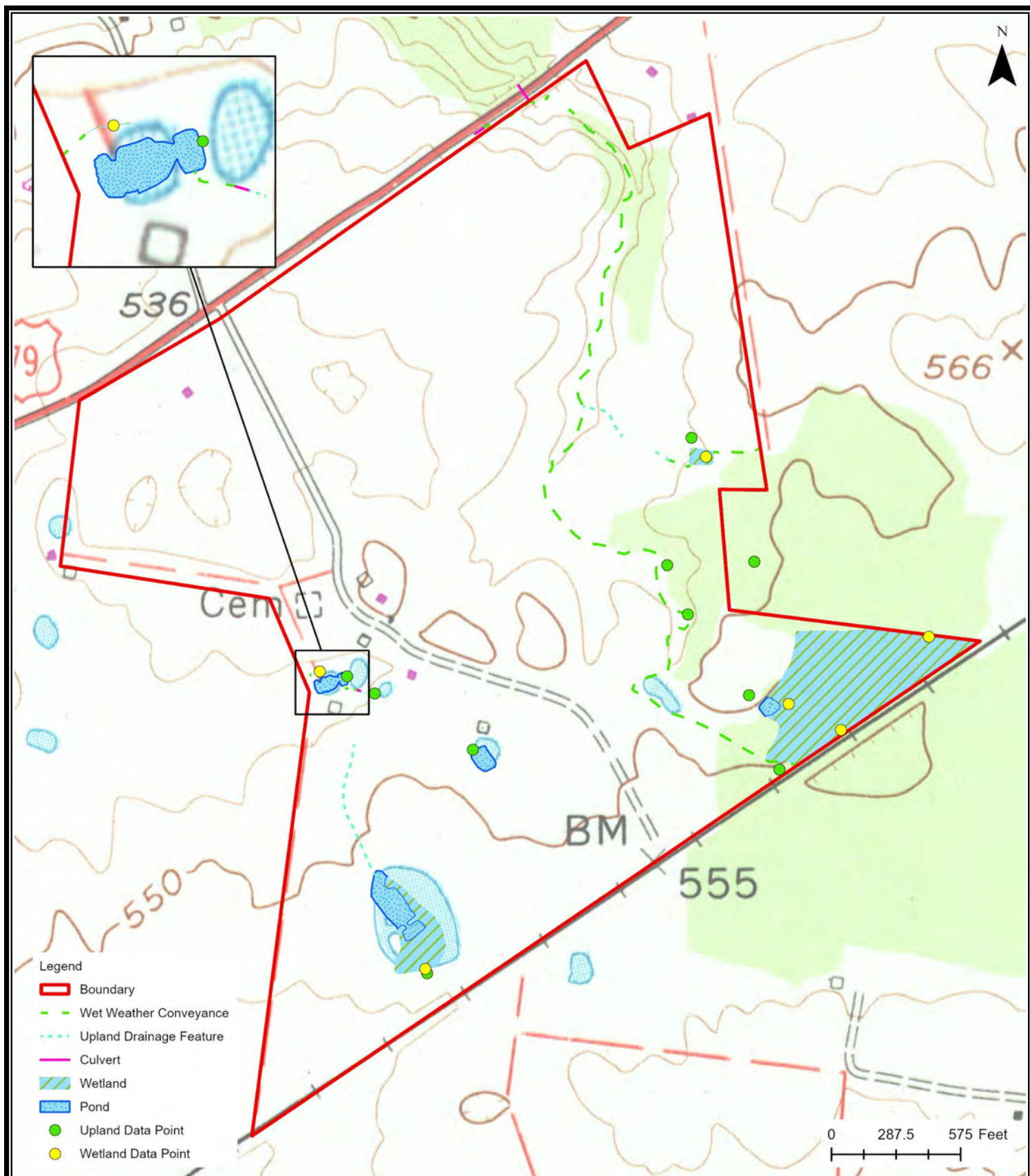
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Solutions to Your Environmental Challenges

TITLE
Figure 6 — Site Soils Map Hydrologic Determination Provident Realty Advisors Bellamy Property Clarksville, Montgomery County, Tennessee



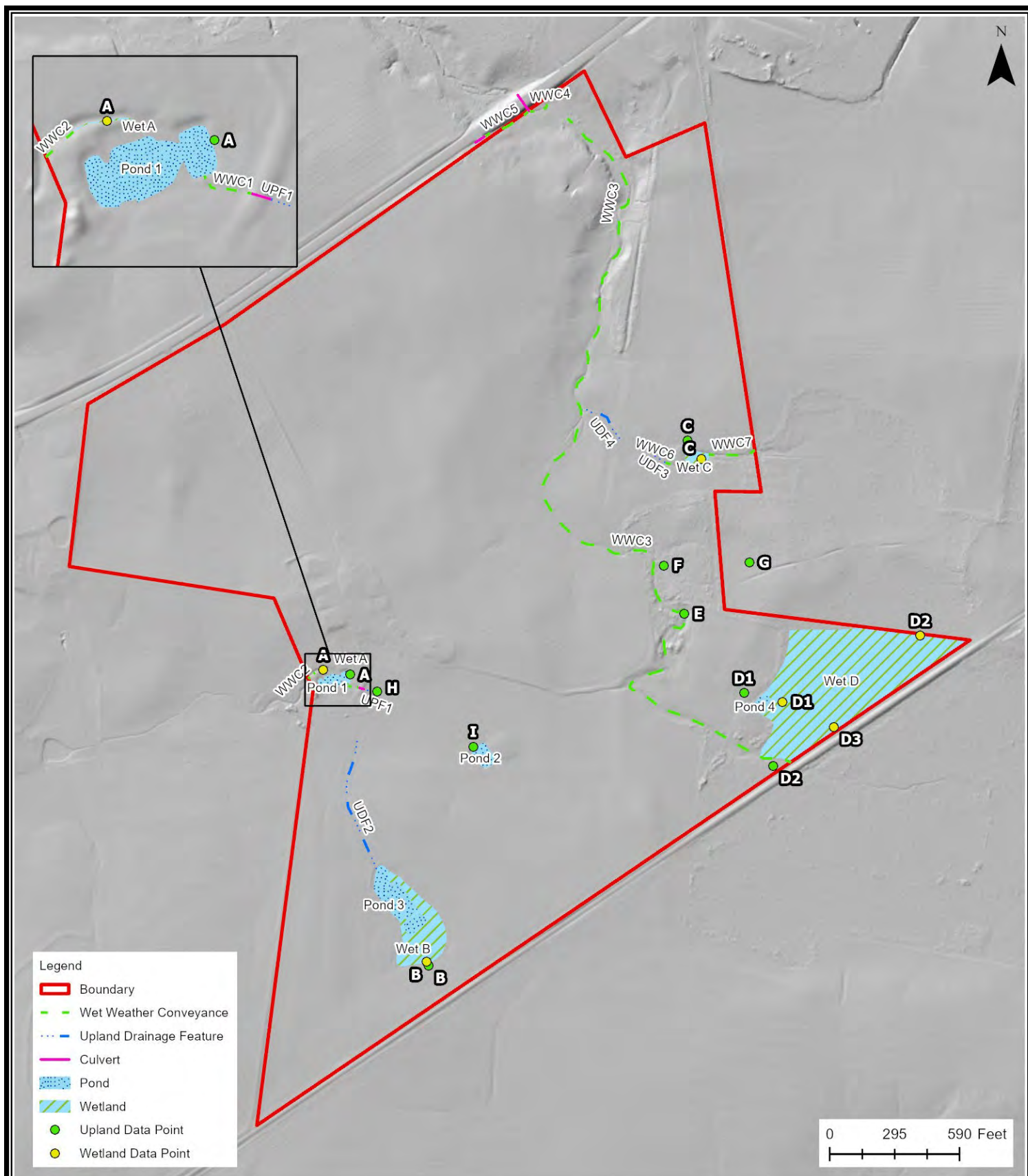
Source: Image courtesy of ESRI.

				Drawn By:	Client #:	<div> <div> 901 Woodland Street Suite 104 Nashville, TN 37206 P - 615-469-4941 </div> <div> 85 Spectrum Cove Alabaster, AL 35007 O - 205-664-2000 F - 205-664-2142 </div> </div>	
				KK	3619		
				Checked By:	Date:		
				AH	11/16/2021		
				Project Mgr.:	Project #:	<div>  <div> SPECTRUM Solutions to Your Environmental Challenges </div> </div>	
NO.	DATE	REVISION NOTE	BY	MR	3619-001-30		
						TITLE Figure 7 — Site Geologic Map Hydrologic Determination Provident Realty Advisors Bellamy Property Clarksville, Montgomery County, Tennessee	



Source: Image courtesy of ESRI and USGS. USGS Hopkinsville, TN 7.5 minute quadrangle.

				Drawn By:	Client #:	<div><div>901 Woodland Street Suite 104 Nashville, TN 37206 P - 615-469-4941</div><div></div><div>85 Spectrum Cove Alabaster, AL 35007 O - 205-664-2000 F - 205-664-2142</div></div>		<div>TITLE Figure 8a — Site Delineation Overview Hydrologic Determination Provident Realty Advisors Bellamy Property Clarksville, Montgomery County, Tennessee</div>			
				KK	3619						
				Checked By:	Date:						
				AH	11/16/2021						
				Project Mgr.:	Project #:	<div></div>					
NO.	DATE	REVISION NOTE	BY	MR	3619-001-30						



Source: Image courtesy of ESRI and USGS.

NO.	DATE	REVISION NOTE	BY

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MR	3619-001-30

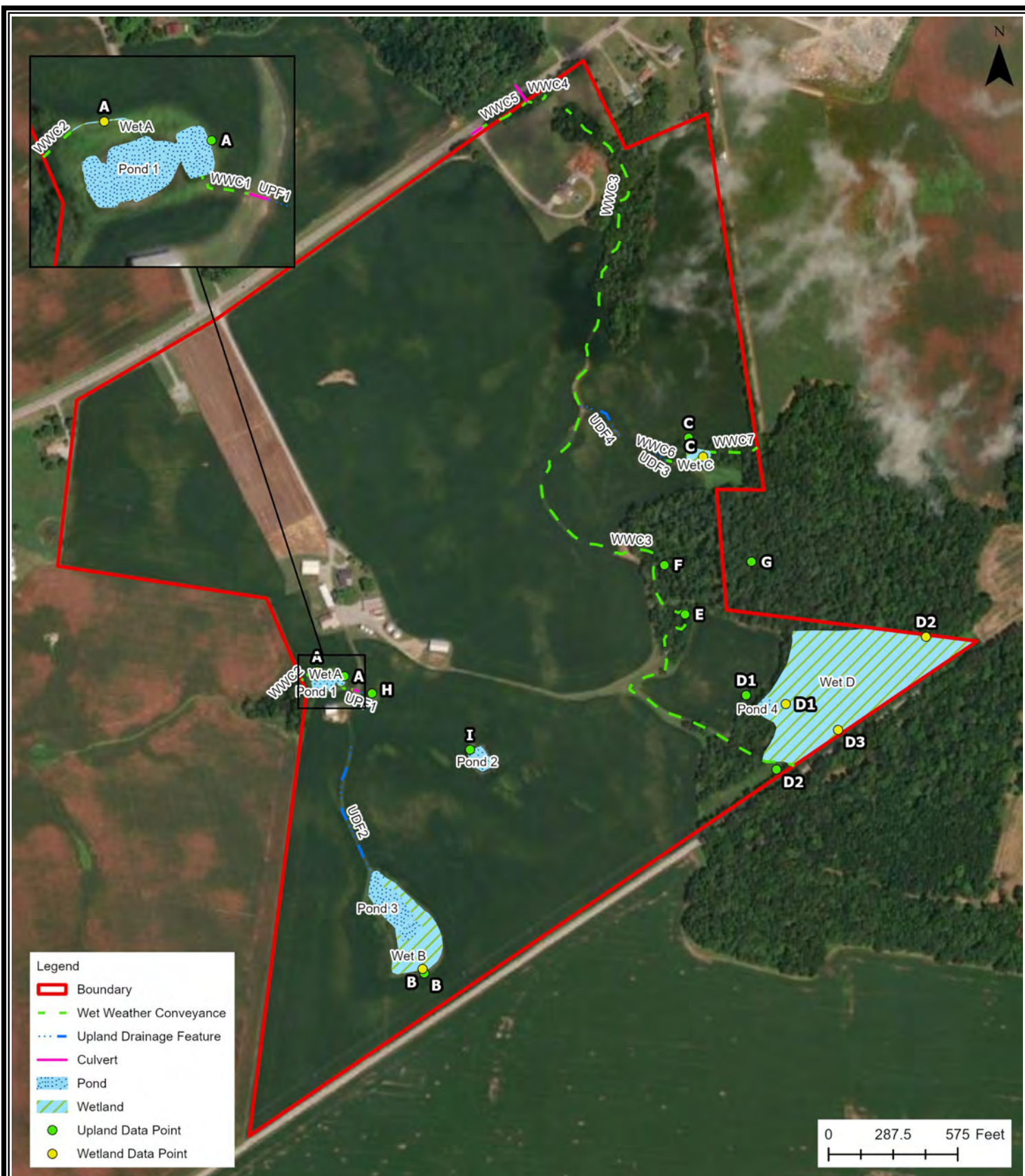
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Figure 8b — Site Delineation Overview
Hydrologic Determination
Provident Realty Advisors
Bellamy Property
Clarksville, Montgomery County, Tennessee



Source: Image courtesy of ESRI.

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Figure 8c — Site Delineation Overview
Hydrologic Determination
Provident Realty Advisors
Bellamy Property
Clarksville, Montgomery County, Tennessee

Site ID	Start/Mid Lat, Long (Decimal Degrees)		End Lat, Long (Decimal Degrees)		Total Mapped		Average Width at OHWM	Type
	Latitude	Longitude	Latitude	Longitude	LF	Acre		
WWC1	36.608101	-87.243955	36.608157	-87.244138	64	0.003	2	Wet Weather Conveyance
WWC2	36.608291	-87.244641	36.608213	-87.244746	42	0.002	2	Wet Weather Conveyance
WWC3	36.607174	-87.237272	36.615177	-87.240736	4,302	0.37	3.75	Wet Weather Conveyance
WWC4	36.615342	-87.241027	36.615269	-87.24133	105	0.01	3	Wet Weather Conveyance
WWC5	36.614951	-87.24202	36.61527	-87.241329	285*	0.01	2	Wet Weather Conveyance
WWC6	36.610847	-87.238903	36.610899	-87.239216	104	0.005	2	Wet Weather Conveyance
WWC7	36.611000	-87.238549	36.611055	-87.237833	217	0.01	2.5	Wet Weather Conveyance
UDF1	36.608062	-87.243809	36.608084	-87.243887	45**	-	-	Upland Drainage Feature
UDF2	36.605841	-87.243684	36.607436	-87.243994	617	-	-	Upland Drainage Feature
UDF3	36.610898	-87.239213	36.611002	-87.23942	72	-	-	Upland Drainage Feature
UDF4	36.611189	-87.239922	36.611548	-87.240527	247	-	-	Upland Drainage Feature
Pond 1	36.608184	-87.244351	-	-	-	0.18	-	Open Water Pond
Pond 2	36.607258	-87.242035	-	-	-	0.18	-	Open Water Pond
Pond 3	36.605454	-87.24337	-	-	-	0.70	-	Open Water Pond
Pond 4	36.607893	-87.237689	-	-	-	0.13	-	Open Water Pond
Wet A	36.608319	-87.244493	-	-	-	0.003	-	Linear Wetland
Wet B	36.605068	-87.24301	-	-	-	1.1	-	Fringe Wetland
Wet C	36.610939	-87.238732	-	-	-	0.17	-	Forested Wetland
Wet D	36.608188	-87.236491	-	-	-	6.84	-	Emergent/Forested Wetland

*Includes 50 LF of a previously piped section of WWC5

**Includes 20 LF of a previously piped section of UDF1

NO.	DATE	REVISION NOTE	BY

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TITLE
Figure 8d — Site Delineation Table Hydrologic Determination Provident Realty Advisors Bellamy Property Clarksville, Montgomery County, Tennessee

APPENDIX A

Landowner Access Letter



March 17, 2022

Tennessee Department of Environment and Conservation
Division of Water Resources – Nashville Environmental Field Office
711 R. S. Gass Blvd.
Nashville, TN 37216

Subject: Request for Hydrologic Determination – Landowner Access Letter
Bellamy Property
Clarksville, Montgomery County, Tennessee
Centered at Latitude 36.609700° North and Longitude -87.242000° West
Project No. 3619-011-30

To Whom it May Concern:

I currently own the above-identified property located in Clarksville, Montgomery County, Tennessee.

The subject property is being considered for development. I grant permission for the Tennessee Department of Environment and Conservation – Division of Water Resources personnel to access my property for the purposes of completing a hydrologic determination (HD).

My information is as follows:

Name: Ralph Bellamy Jr.

Address: 1490 Charles Bell Rd. Clarksville, TN 37040

Phone: 931-216-4427

Email: dority.ralph@gmail.com

Signature: *Ralph Bellamy*

If you have any questions or need additional information, please feel free to contact Marian Rubin at (615) 613-2066 (mrubin@specenviro.com) or Kari Kennel at (901) 831-3565 (kkennel@specenviro.com)

Sincerely,
SPECTRUM ENVIRONMENTAL, INC.

Kari A. Kennel
Kari A. Kennel, QHP-IT
Staff Scientist

Marian R. Rubin
Marian R. Rubin, QHP-IT
Mid-South Division Manager
Staff Biologist

APPENDIX B

Calculation of Normal Weather Conditions

Table 1. Calculation of Normal Weather Conditions / Bellamy Property -Clarksville, TN - September 2021

		Long-term Rainfall Records				Actual Rainfall*	Condition	Condition Value	Month Weight Value	Product of Previous two columns
	Month	Std. Dev.	Minus one Std. Dev (DRY)	Normal (Mean Inches)	Plus One Std. Dev. (WET)					
1st month prior	Aug-21	2.03	1.27	3.3	5.33	7.62	Wet	3	3	9
2nd Month prior	Jul-21	1.82	2.03	3.85	5.67	6.25	Wet	3	2	6
3rd month prior	Jun-21	2.22	1.75	3.97	6.19	6.26	Wet	3	1	3
									Sum	18

Note:	
If sum is:	
6-9	then prior period has been drier than normal
10-14	then prior period has been normal
15-18	then prior period has been wetter than normal

Condition Value	
Dry =	1
Normal =	2
Wet=	3

Conclusions: Actual rainfall obtained from weather underground station KTNCLARK126 (WU73)

Monthly percipitation standard deviation and mean sourced from NOAA PSL - Clarksville (1991-2020)

Date of field work 9/13/2021

Weather conditions prior to this period have been wetter than normal.

Table 1. Calculation of Normal Weather Conditions / Bellamy Property -Clarksville, TN - November 2021

		Long-term Rainfall Records								
	Month	Std. Dev.	Minus one Std. Dev (DRY)	Normal (Mean Inches)	Plus One Std. Dev. (WET)	Actual Rainfall*	Condition	Condition Value	Month Weight Value	Product of Previous two columns
1st month prior	Oct-21	1.56	1.27	2.83	4.39	5.43	Wet	3	3	9
2nd Month prior	Sep-21	1.98	1.21	3.19	5.17	2.74	Normal	2	2	4
3rd month prior	Aug-21	2.03	1.27	3.3	5.33	7.62	Wet	3	1	3
									Sum	16

Note:	
If sum is:	
6-9	then prior period has been drier than normal
10-14	then prior period has been normal
15-18	then prior period has been wetter than normal

Condition Value	
Dry =	1
Normal =	2
Wet=	3

Conclusions: Actual rainfall obtained from weather underground station KTNCLARK126 (WU73)

Monthly percipitation standard deviation and mean sourced from NOAA PSL - Clarksville (1991-2020)

Date of field work 11/8/2021 and 11/15/2021

Weather conditions prior to this period have been wetter normal.

APPENDIX C

Site Reconnaissance Photographs

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Up H Pit
Upgradient from UDF1



Up H Pit
Area surrounding Up H pit facing east

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Up H Pit
Area surrounding Up H pit facing west



Up H Pit
Area surrounding Up H pit facing south

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



UDF1 facing upgradient to the east of culvert (C1)



UDF1 facing down gradient to the east of culvert (C1)

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



WWC1 facing upgradient to the west of culvert (C1)



WWC1 facing upgradient to the west of culvert (C1) toward Pond 1

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Pond 1 facing northwest



Pond 1 facing west

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Pond 1 facing east



Pond 1 facing north

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



WWC2 facing downstream toward western property boundary



WWC2 facing upstream near western property boundary

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Linear Wet A soils
Wet A Pit



Linear Wet A soils
Wet A Pit

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Up A Pit
Upgradient from the eastern bank of Pond 1



Up A Pit
Upgradient from the eastern bank of Pond 1

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Area surrounding Up A pit facing west



Area surrounding Up A pit facing south

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Pond 2 facing south



Pond 2 facing west

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Pond 2 facing north



Pond 2 facing east

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Up I pit
Upgradient of Pond 2 fringe



Up I pit
Upgradient of Pond 2 fringe

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Area surrounding Up I pit facing east



Area surrounding Up I pit facing southwest

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



UDF2 Facing downstream



UDF2 Facing upstream

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Pond 3 facing east



Pond 3 and Wet B facing south

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Pond 3 and Wet B facing north



Pond 3 and Wet B facing west

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Soils within Wet B
Wet B Pit



Soils within Wet B
Wet B Pit

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Wet B
Area surrounding Wet B Pit facing north



Wet B
Area surrounding Wet B Pit facing east

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Wet B
Area surrounding Wet B Pit facing west



Wet B
Area surrounding Wet B Pit facing south

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Up B Pit
Upgradient of Wet B



Up B Pit
Upgradient of Wet B

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Area surrounding Up B Pit facing south



Area surrounding Up B Pit facing east

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Area surrounding Up B Pit facing west



Area surrounding Up B Pit facing north

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



WWC3 facing upstream at property boundary adjacent to rail road tracks



WWC3 facing downstream at property boundary adjacent to rail road tracks

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



WWC3 facing upstream toward the powerline clearing

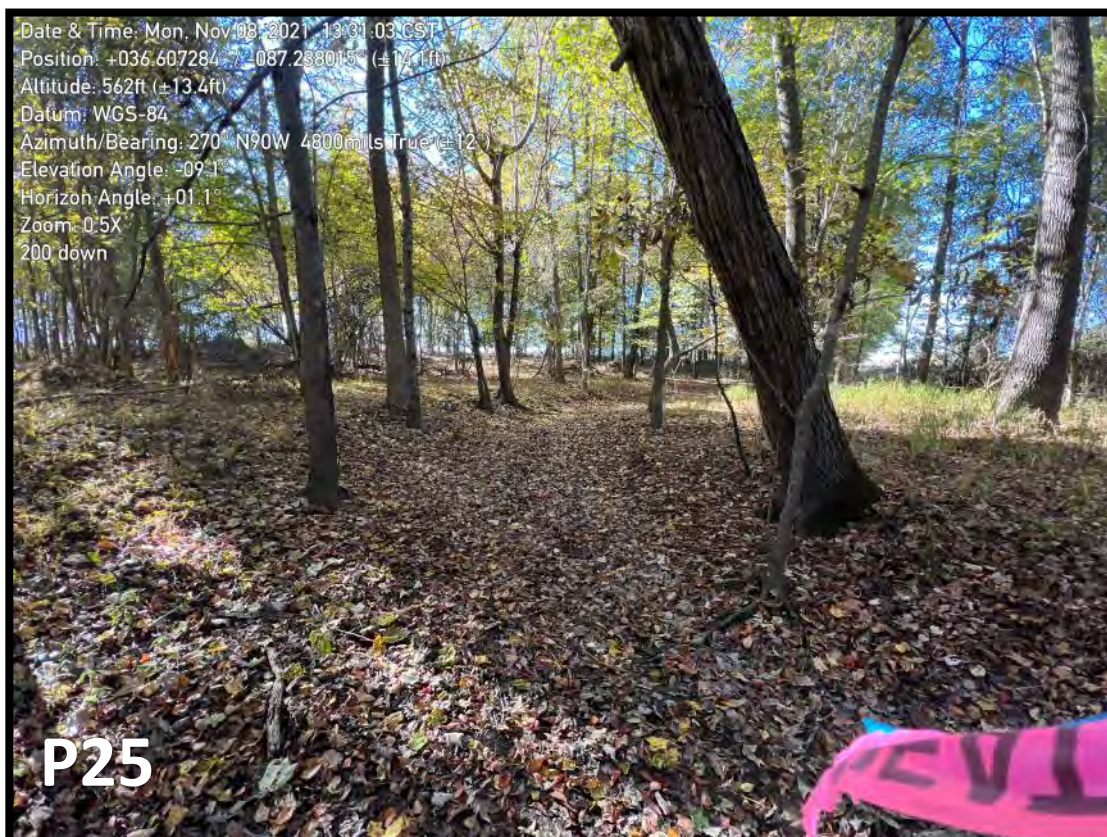


WWC3 facing downstream away from the powerline clearing

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021

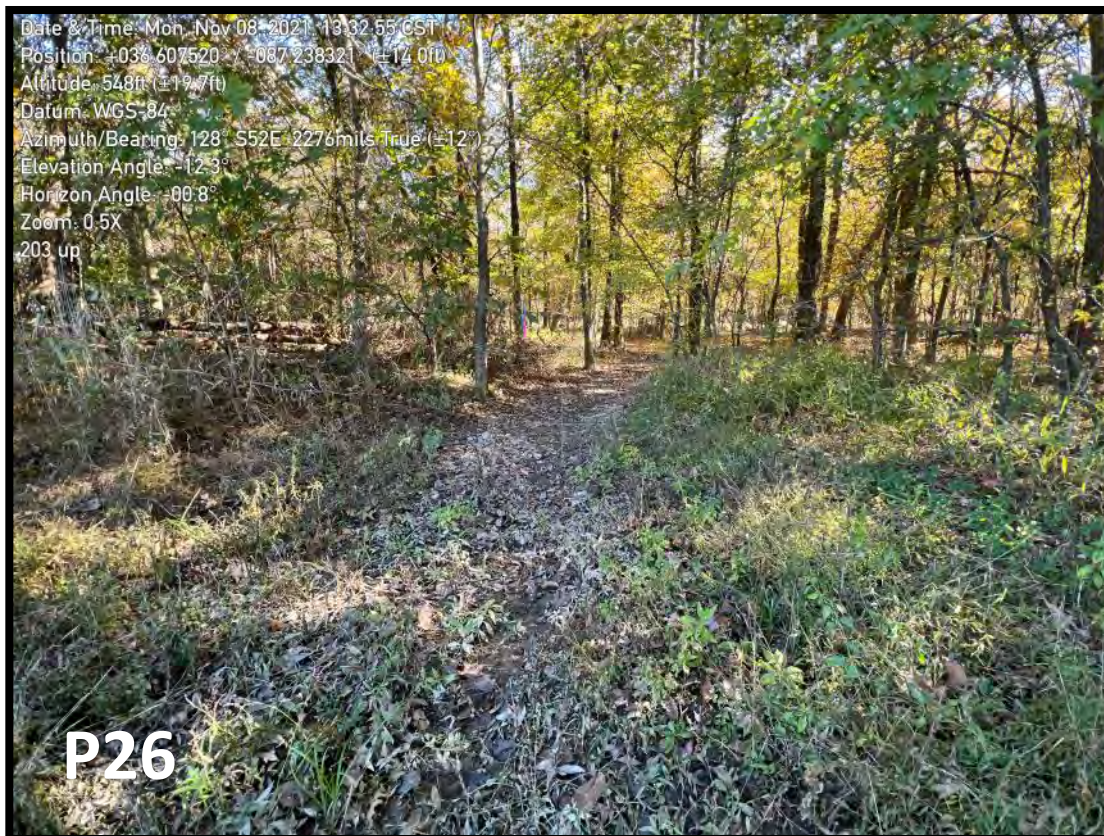


WWC3 facing upstream in wood area



WWC3 facing downstream in wood area

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



WWC3 facing upstream



WWC3 facing downstream

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



WWC3 (grassy swale) facing upstream



WWC3 (grassy swale) facing downstream

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021

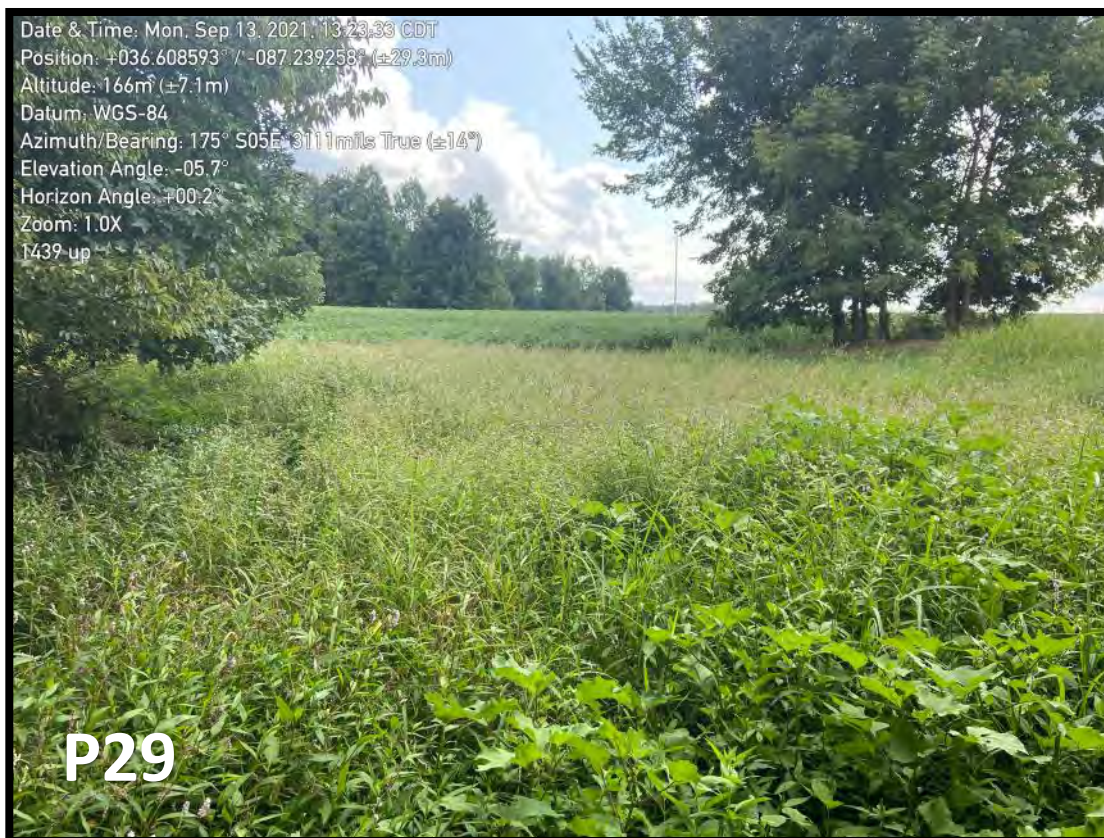


WWC3 (grassy swale) facing upstream



WWC3 (grassy swale) facing downstream

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



WWC3 facing upstream



WWC3 facing downstream

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



WWC3 facing upstream



WWC3 facing downstream

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Up E Pit
Adjacent to WWC3



Up E Pit
Adjacent to WWC3

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Area surrounding Up E Pit facing east



Area surrounding Up E Pit facing north

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Area surrounding Up E Pit facing west



Area surrounding Up E Pit facing south

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



WWC3 facing upstream



WWC3 facing downstream

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Up F Pit



Up F Pit

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



WWC3 facing upstream at transition from wooded area to crop field



WWC3 facing upstream at transition from wooded area to crop field

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021

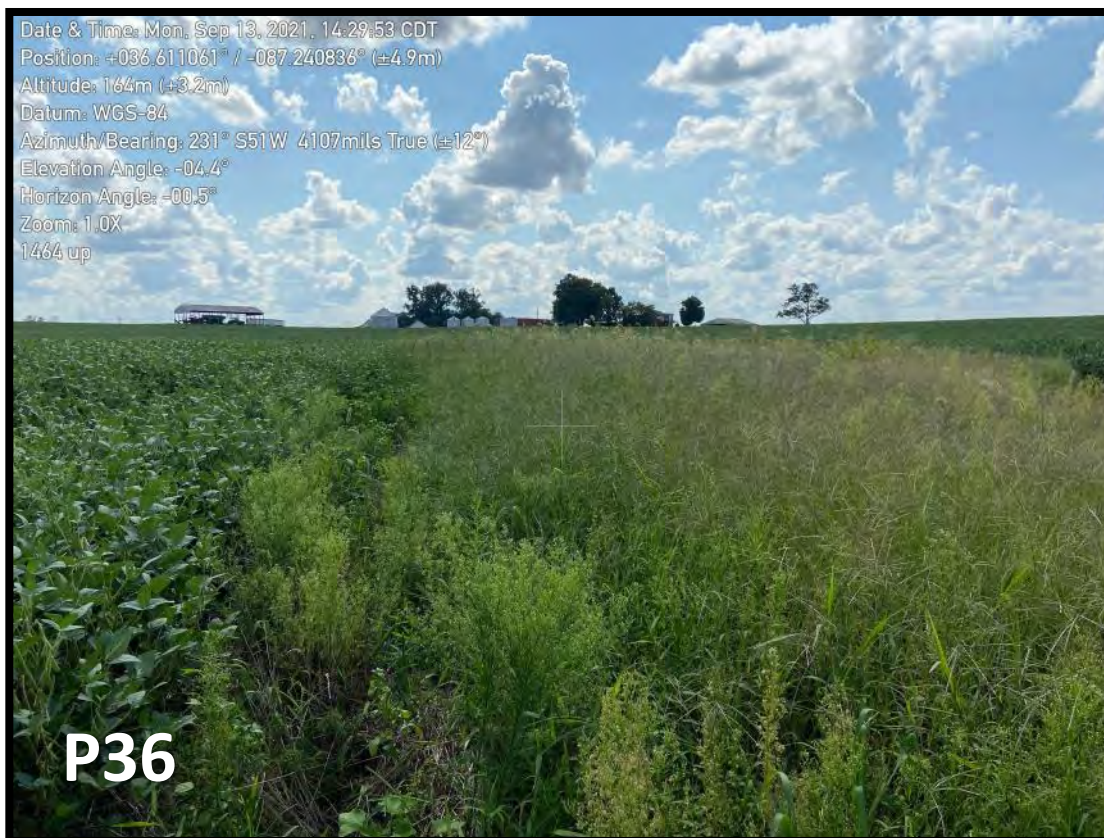


WWC3 facing upstream in crop field



WWC3 facing downstream in crop field

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



WWC3 facing upstream in crop field



WWC3 facing downstream in crop field

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



WWC3 facing upstream at transition from crop field to wooded area



WWC3 facing upstream at transition from crop field to wooded area

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



WWC3 facing upstream in wooded area



WWC3 facing downstream in wooded area

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



WWC3 facing upstream in wooded area



WWC3 facing downstream in wooded area

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



End of WWC3 facing upstream at transition from wooded area to grassy area



End of WWC3 facing downstream at transition from wooded area to grassy area

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



WWC4 facing downstream adjacent to Guthrie HWY



WWC4 facing downstream adjacent to Guthrie HWY

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



WWC4 facing upstream adjacent to Guthrie HWY



Confluence of WWC4 and WWC5R2 facing downstream toward culvert beneath Guthrie HWY

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



WWC5R2 facing upstream adjacent to Guthrie HWY



WWC5R2 facing upstream toward culvert beneath driveway adjacent to Guthrie HWY

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Roadside ditch facing downstream adjacent to Guthrie HWY



Roadside ditch facing upstream adjacent to Guthrie HWY

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Roadside ditch facing downstream adjacent to Guthrie HWY



Roadside ditch facing upstream adjacent to Guthrie HWY

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Soils from Wetland C
Wet C Pit



Soils from Wetland C
Wet C Pit

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Wetland C
Area surrounding Wet C Pit facing south



Wetland C
Area surrounding Wet C Pit facing east

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Wetland C
Area surrounding Wet C Pit facing north



Wetland C
Area surrounding Wet C Pit facing west

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



UDF3 facing northwest 'upstream'

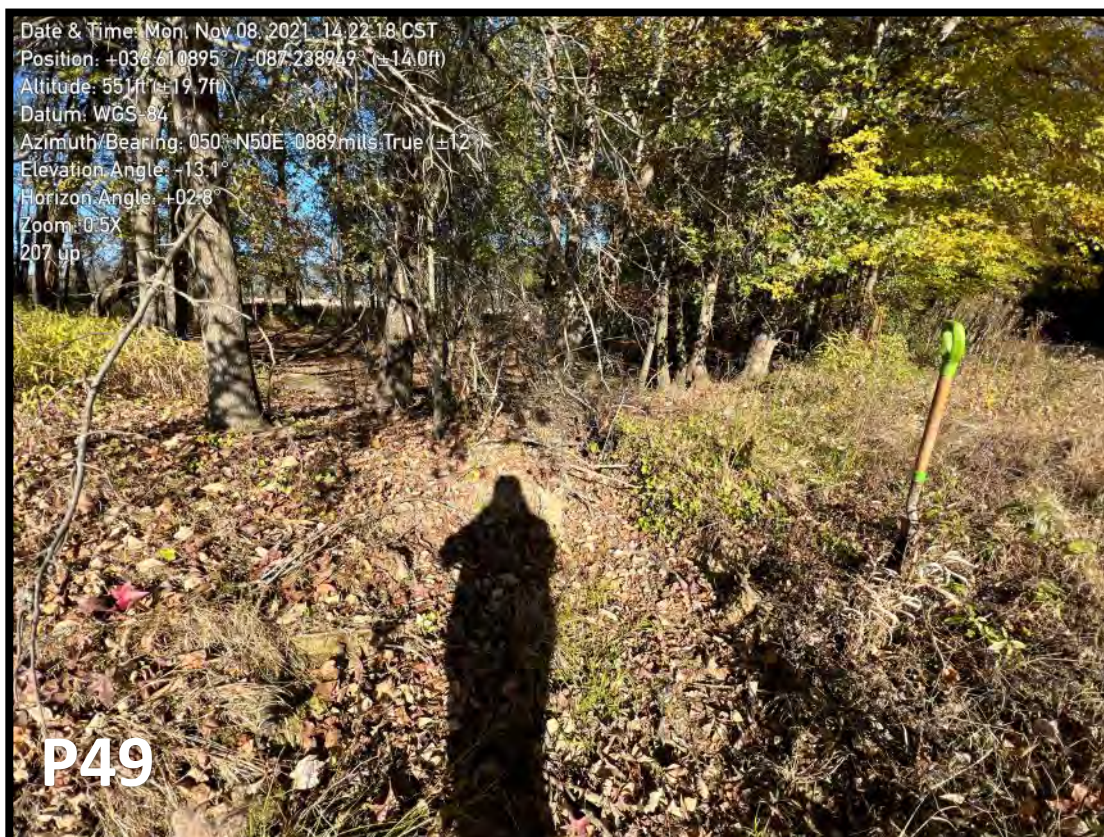


UDF3 facing southeast 'downstream'

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



UDF3 transition into WWC6 facing upstream



UDF3 transition into WWC6 facing downstream toward Wet C

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Up C Pit in field upgradient to the north from Wet C

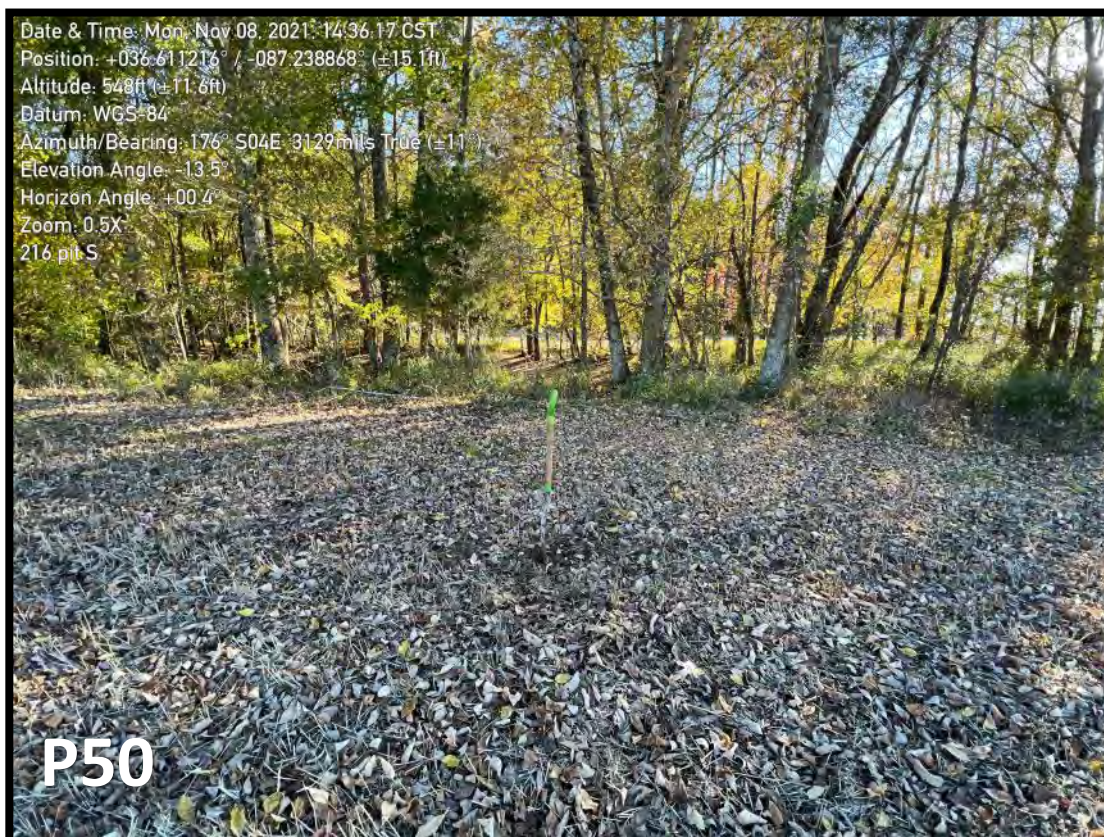


Up C Pit in field upgradient to the north from Wet C

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Area surrounding Up C Pit facing west



Area surrounding Up C Pit facing south

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Area surrounding Up C Pit facing east



Area surrounding Up C Pit facing southwest

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Up G Pit



Up G Pit

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Area surrounding Up G Pit facing north



Area surrounding Up G Pit facing south

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



WWC7 facing upstream across eastern property boundary



WWC7 facing downstream at eastern property boundary

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



WWC7 facing upstream

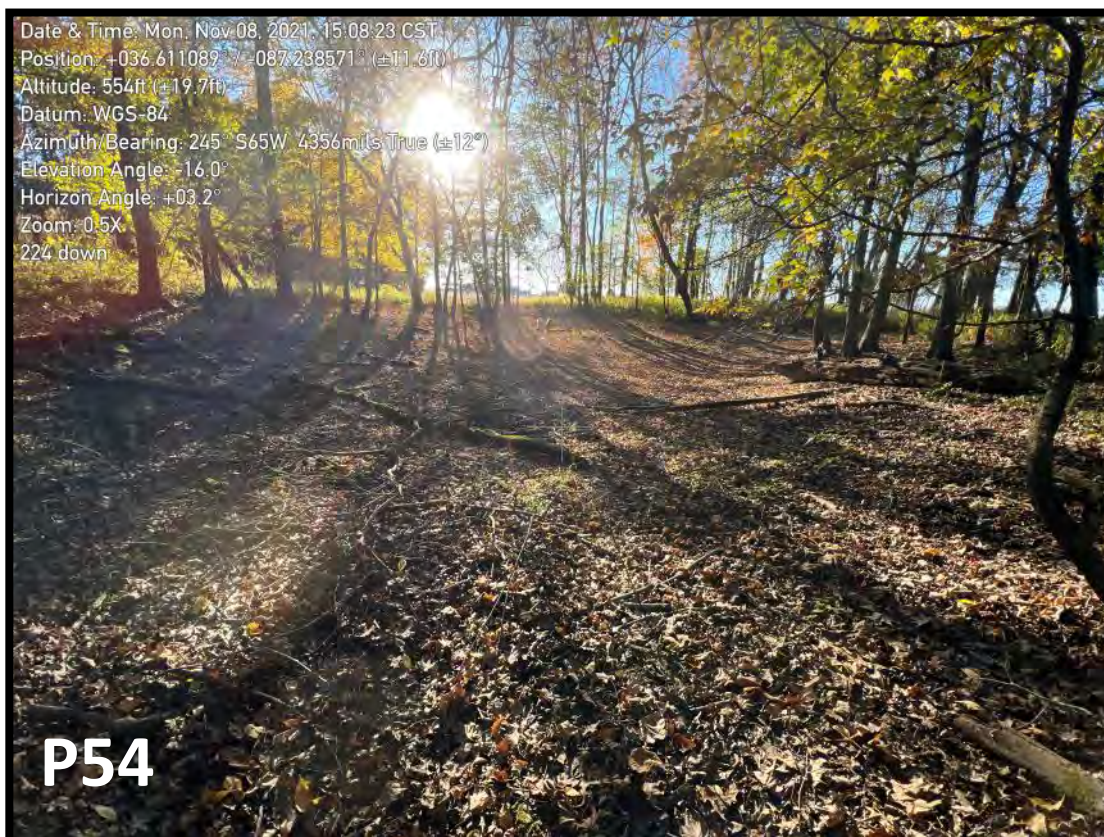


WWC7 facing downstream toward Wet C

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



WWC7 facing upstream at confluence with Wet C



WWC7 facing downstream at confluence with Wet C

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Pond 4 located within Wet D



Pond 4 located within Wet D

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021

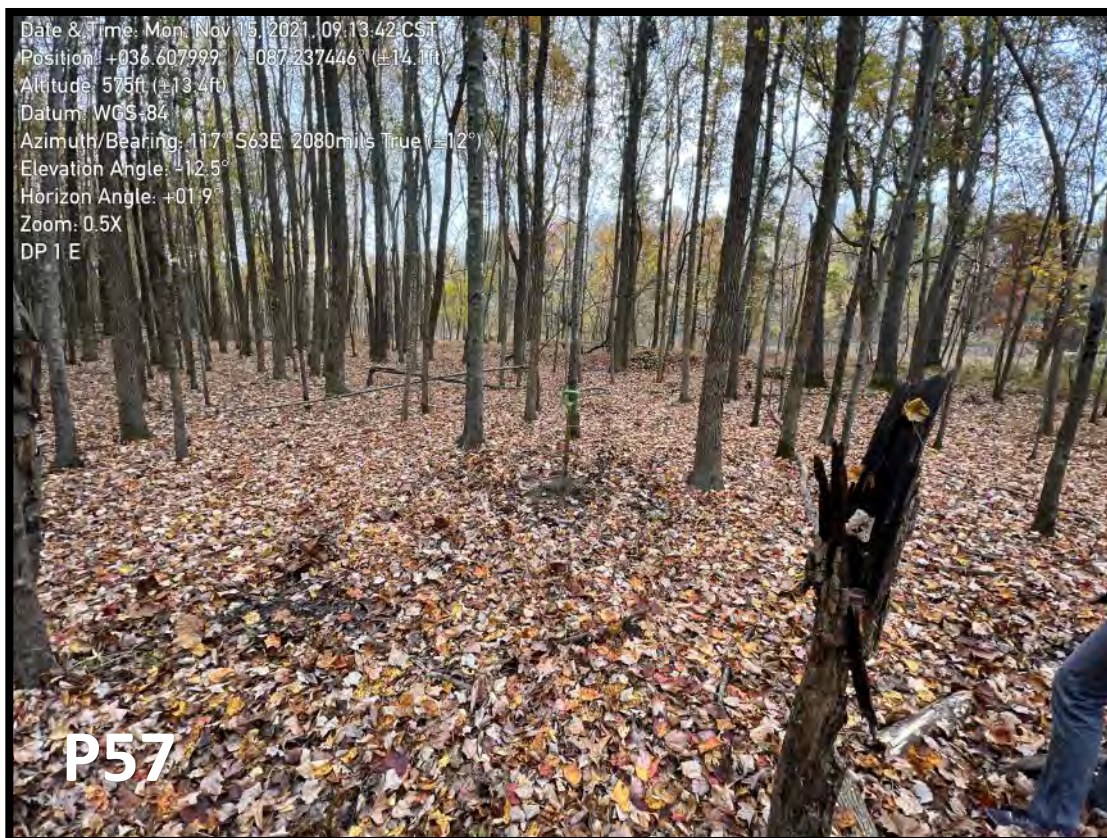


Soils from Wetland D
Wet D1 Pit



Soils from Wetland D
Wet D1 Pit

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021

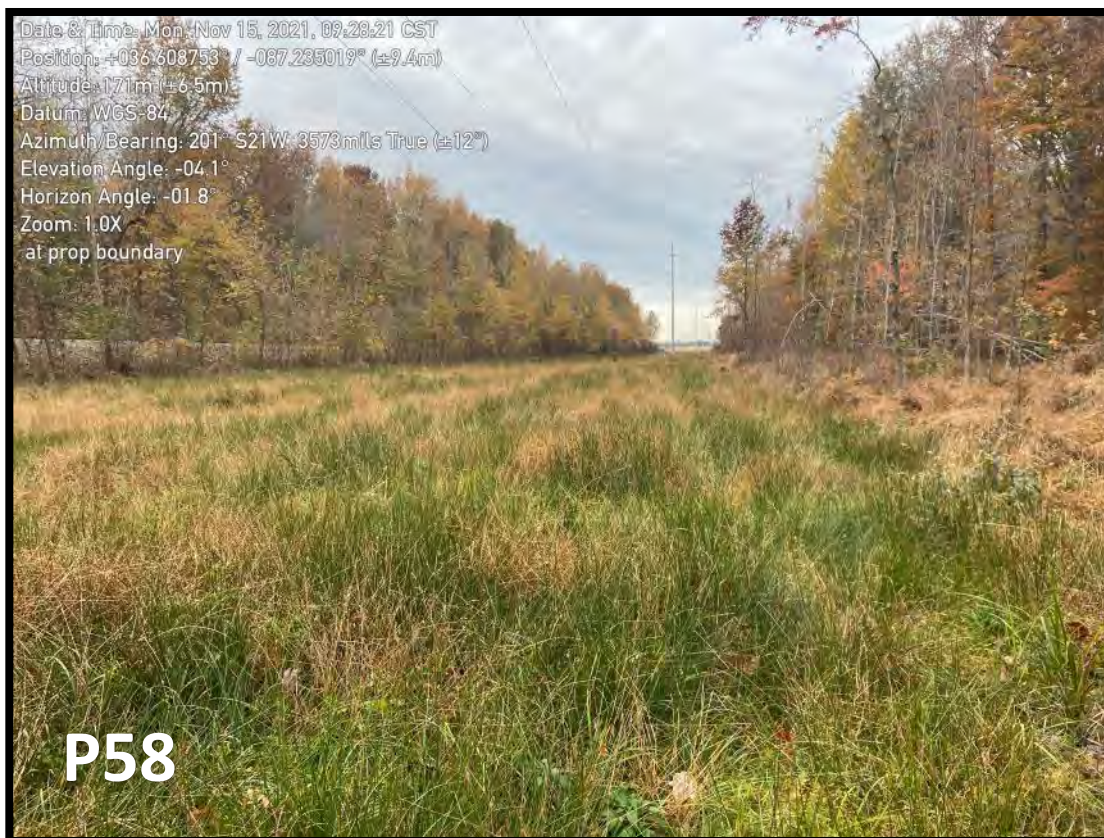


Wetland D
Area surrounding Wet D1 Pit facing east



Wetland D
Area surrounding Wet D1 Pit facing west

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Far eastern portion of Wet D in powerline clearing facing west



Far eastern portion of Wet D in powerline clearing facing east towards adjacent property

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Soils from Wetland D
Wet D2 Pit



Area surrounding Wet D2 Pit facing south

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Soils from Wetland D
Wet D3 Pit



Soils from Wetland D
Wet D3 Pit

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Wet D
Area surrounding Wet D3 pit facing northwest



Wet D
Area surrounding Wet D3 pit facing northeast

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Up D2 Pit located upgradient to the south of Wet D



Area surrounding Up D2 Pit upgradient of to the south of Wet D
Facing northeast

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Area surrounding Up D2 Pit upgradient of to the south of Wet D
Facing southwest



Up D1 Pit located upgradient to the west of Wet D

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Area surrounding Up D1 Pit upgradient of to the west of Wet D
Facing north



Area surrounding Up D1 Pit upgradient of to the west of Wet D
Facing east towards Wet D

Site Reconnaissance Photographs — September 13, November 8 & 15, 2021



Area surrounding Up D1 Pit upgradient of to the west of Wet D
Facing south

APPENDIX D

Tennessee Department of Environment and Conservation Hydrologic Determination Field Data Sheets

Hydrologic Determination Field Data Sheet
Tennessee Division of Water Pollution Control, Version 1.5

Named Waterbody: <u>UDF2</u>	GPS <u>188-195</u>	Date/Time: <u>11/8 1:40</u>
Assessors/Affiliation: <u>Marian Rubin QHP-IT, Kari Kennel QHP-IT</u>	Project ID: <u>3299-023-30</u>	
Site Name/Description: <u>Bellamy Property</u>		
Site Location: <u>Clarksville, TN</u>		
HUC (12 digit): <u>051302060603</u>	Lat: <u>36.605841</u>	
Previous Rainfall (7-days): <u>0.03"</u>	Long: <u>-87.243684</u>	
Precipitation this Season vs. Normal: abnormally wet elevated <u>average</u> low abnormally dry unknown		
Source of recent & seasonal precip data: <u>WUNDERGROUND KTNCLARK 150</u>		
Watershed Size: <u>N/A</u>	County: <u>Montgomery</u>	
Soil Type(s) / Geology: <u>Dickson Silt Loam / Ft. Geneva Limestone</u>	Source: <u>WSS/USGS</u>	
Surrounding Land Use: <u>Agricultural / Forested</u>		
Degree of historical alteration to natural channel morphology & hydrology (circle one & describe fully in Notes): Severe Moderate Slight Absent		

Primary Field Indicators Observed

Primary Indicators	NO	YES
1. Hydrologic feature exists solely due to a process discharge	<input checked="" type="checkbox"/>	WWC
2. Defined bed and bank absent, vegetation composed of upland and FACU species	<input type="checkbox"/>	<u>WWC</u>
3. Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions	<input type="checkbox"/>	WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	<input type="checkbox"/>	WWC
5. Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase	<input type="checkbox"/>	Stream
6. Presence of fish (except <i>Gambusia</i>)	<input type="checkbox"/>	Stream
7. Presence of naturally occurring ground water table connection	<input type="checkbox"/>	Stream
8. Flowing water in channel and 7 days since last precip >0.1" in local watershed	<input type="checkbox"/>	Stream
9. Evidence watercourse has been used as a supply of drinking water	<input type="checkbox"/>	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-WPC Guidance For Making Hydrologic Determinations, Version 1.5*

Overall Hydrologic Determination = Grassy Swale
Secondary Indicator Score (if applicable) = N/A

Justification / Notes: grassy swale in field

Hydrologic Determination Field Data Sheet Tennessee Division of Water Pollution Control, Version 1.5

11/8/21

Named Waterbody: <u>WWC1</u>		Date/Time: <u>12:00</u>
Assessors/Affiliation: <u>Marian Rubin QHP-IT, Kari Kennel QHP-IT</u>		Project ID: <u>3299-023-30</u>
Site Name/Description: <u>Bellamy Property</u>		
Site Location: <u>Clarksville, TN</u>		
HUC (12 digit): <u>051302060603</u>	Lat: <u>36.608101</u>	
Previous Rainfall (7-days): <u>0.03"</u>	Long: <u>-87.243955</u>	
Precipitation this Season vs. Normal: abnormally wet elevated <u>average</u> low abnormally dry unknown		
Source of recent & seasonal precip data: <u>Wunderground KTNCLARK156</u>		
Watershed Size: <u>0.05 sq. mi.</u>	County: <u>Montgomery</u>	
Soil Type(s) / Geology: <u>Guthrie Silt Loam / St Genesieve Limestone</u>	Source: <u>WJS/USGS</u>	
Surrounding Land Use: <u>Agricultural / Forested</u>		
Degree of historical alteration to natural channel morphology & hydrology (circle one & describe fully in Notes): Severe Moderate Slight Absent		

Primary Field Indicators Observed

Primary Indicators	NO	YES
1. Hydrologic feature exists solely due to a process discharge	<input checked="" type="checkbox"/>	WWC
2. Defined bed and bank absent, vegetation composed of upland and FACU species	<input checked="" type="checkbox"/>	WWC
3. Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions	<input checked="" type="checkbox"/>	WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	<input checked="" type="checkbox"/>	WWC
5. Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase	<input checked="" type="checkbox"/>	Stream
6. Presence of fish (except <i>Gambusia</i>)	<input checked="" type="checkbox"/>	Stream
7. Presence of naturally occurring ground water table connection	<input checked="" type="checkbox"/>	Stream
8. Flowing water in channel and 7 days since last precip >0.1" in local watershed	<input checked="" type="checkbox"/>	Stream
9. Evidence watercourse has been used as a supply of drinking water	<input checked="" type="checkbox"/>	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-WPC Guidance For Making Hydrologic Determinations, Version 1.5*

Overall Hydrologic Determination = WWC

Secondary Indicator Score (if applicable) = 8.5

Justification / Notes :

Secondary Field Indicator Evaluation

A. Geomorphology (Subtotal = 3)

A. Geomorphology (Subtotal = 5)	Absent	Weak	Moderate	Strong
1. Continuous bed and bank	0	1	2	3
2. Sinuous channel	0	1	2	3
3. In-channel structure: riffle-pool sequences	0	1	2	3
4. Sorting of soil textures or other substrate	0	1	2	3
5. Active/relic floodplain	0	0.5	1	1.5
6. Depositional bars or benches	0	1	2	3
7. Braided channel	0	1	2	3
8. Recent alluvial deposits	0	0.5	1	1.5
9. Natural levees	0	1	2	3
10. Headcuts	0	1	2	3
11. Grade controls	0	0.5	1	1.5
12. Natural valley or drainageway	0	0.5	1	1.5
13. At least second order channel on existing USGS or NRCS map	No = 0		Yes = 3	

B. Hydrology (Subtotal =)

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

C. Biology (Subtotal =)

C. Biology (Subtotal =)	Absent	Weak	Moderate	Strong
20. Fibrous roots in channel bed ¹	3	2	1	0
21. Rooted plants in the thalweg ¹	3	2	1	0
22. Crayfish in stream (exclude in floodplain)	0	1	2	3
23. Bivalves/mussels	0	1	2	3
24. Amphibians	0	0.5	1	1.5
25. Macrobenthos (record type & abundance)	0	1	2	3
26. Filamentous algae; periphyton	0	1	2	3
27. Iron oxidizing bacteria/fungus	0	0.5	1	1.5
28. Wetland plants in channel bed ²	0	0.5	1	1.5

Focus is on the presence of terrestrial plants.

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

Total Points = 8.5

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

Notes :

Notes:

Hydrologic Determination Field Data Sheet Tennessee Division of Water Pollution Control, Version 1.5

Named Waterbody: <u>WWC 2</u>	<u>GP5169-168</u>	Date/Time: <u>11/8 12PM</u>
Assessors/Affiliation: <u>Marian Robin QHP-IT, Kari Kennel QHP-IT</u>	Project ID: <u>3299-023-30</u>	
Site Name/Description: <u>Bellamy Property</u>		
Site Location: <u>Clarksville, TN</u>		
HUC (12 digit): <u>051302060603 - Spring Creek</u>	Lat: <u>36.608291</u>	
Previous Rainfall (7-days): <u>0.03"</u>	Long: <u>-87.244641</u>	
Precipitation this Season vs. Normal: <u>abnormally wet</u> <u>elevated</u> <u>average</u> <u>low</u> <u>abnormally dry</u> <u>unknown</u>		
Source of recent & seasonal precip data: <u>Wunderground KTNCLARKISD</u>		
Watershed Size: <u>0.05 sq. m.</u>	County: <u>Montgomery</u>	
Soil Type(s) / Geology: <u>Dickson Silt loam / Geneva Limestone</u>	Source: <u>USGS</u>	
Surrounding Land Use: <u>Agricultural / Forested</u>		
Degree of historical alteration to natural channel morphology & hydrology (circle one & describe fully in Notes): Severe Moderate Slight Absent		

Primary Field Indicators Observed

Primary Indicators	NO	YES
1. Hydrologic feature exists solely due to a process discharge	<input checked="" type="checkbox"/>	WWC
2. Defined bed and bank absent, vegetation composed of upland and FACU species	<input checked="" type="checkbox"/>	WWC
3. Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions	<input checked="" type="checkbox"/>	WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	<input checked="" type="checkbox"/>	WWC
5. Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase	<input checked="" type="checkbox"/>	Stream
6. Presence of fish (except <i>Gambusia</i>)	<input checked="" type="checkbox"/>	Stream
7. Presence of naturally occurring ground water table connection	<input checked="" type="checkbox"/>	Stream
8. Flowing water in channel and 7 days since last precip $>0.1"$ in local watershed	<input checked="" type="checkbox"/>	Stream
9. Evidence watercourse has been used as a supply of drinking water	<input checked="" type="checkbox"/>	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-WPC Guidance For Making Hydrologic Determinations, Version 1.5*

Overall Hydrologic Determination = WWC

Secondary Indicator Score (if applicable) = 12.5

Justification / Notes :

Secondary Field Indicator Evaluation

A. Geomorphology (Subtotal =)

A. Geomorphology (Subtotal =)	Absent	Weak	Moderate	Strong
1. Continuous bed and bank	0	1	2	3
2. Sinuous channel	0	1	2	3
3. In-channel structure; riffle-pool sequences	0	1	2	3
4. Sorting of soil textures or other substrate	0	1	2	3
5. Active/relic floodplain	0	0.5	1	1.5
6. Depositional bars or benches	0	1	2	3
7. Braided channel	0	1	2	3
8. Recent alluvial deposits	0	0.5	1	1.5
9. Natural levees	0	1	2	3
10. Headcuts	0	1	2	3
11. Grade controls	0	0.5	1	1.5
12. Natural valley or drainageway	0	0.5	1	1.5
13. At least second order channel on existing USGS or NRCS map	No = 0		Yes = 3	

③

B. Hydrology (Subtotal =)

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

5.5

C. Biology (Subtotal =)

C. Biology (Subtotal =)	Absent	Weak	Moderate	Strong
20. Fibrous roots in channel bed ¹	3	2	1	0
21. Rooted plants in the thalweg ¹	3	2	1	0
22. Crayfish in stream (exclude in floodplain)	0	1	2	3
23. Bivalves/mussels	0	1	2	3
24. Amphibians	0	0.5	1	1.5
25. Macroinvertebrates (record type & abundance)	0	1	2	3
26. Filamentous algae; periphyton	0	1	2	3
27. Iron oxidizing bacteria/fungus	0	0.5	1	1.5
28. Wetland plants in channel bed ²	0	0.5	1	1.5

Focus is on the presence of terrestrial plants.

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

④

Total Points = 12.5

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

16) 40%
19) 2" S/I 15% redox 10 YR 5/8

Notes : pond outfall

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or printed text on the paper. A small, faint mark is visible near the center of the page.

Hydrologic Determination Field Data Sheet Tennessee Division of Water Pollution Control, Version 1.5

Named Waterbody: <u>WWC 3</u> <u>GPS 196-209</u>		Date/Time: <u>11/6/14</u>
Assessors/Affiliation: <u>Marian Rubin QHP-IT, Kari Kennel QHP-IT</u>		Project ID: <u>3299-023-30</u>
Site Name/Description: <u>Bellamy Property</u>		
Site Location: <u>Clarksville, TN</u>		
HUC (12 digit): <u>051302060603- Spring Creek</u>		Lat: <u>36.607174</u>
Previous Rainfall (7-days): <u>0.03"</u>		Long: <u>-87.237272</u>
Precipitation this Season vs. Normal: abnormally wet elevated <u>average</u> low abnormally dry unknown Source of recent & seasonal precip data: <u>Underground KTNCLARK150</u>		
Watershed Size: <u>0.19 sq. mi.</u>		County: <u>Montgomery</u>
Soil Type(s) / Geology: <u>Guthrie Silt loam / St. Genevieve Limestone</u>		Source: <u>WSS/USGS</u>
Surrounding Land Use: <u>Agricultural / Forested</u>		
Degree of historical alteration to natural channel morphology & hydrology (circle one & describe fully in Notes): Severe Moderate Slight Absent		

Primary Field Indicators Observed

Primary Indicators	NO	YES
1. Hydrologic feature exists solely due to a process discharge	<input checked="" type="checkbox"/>	WWC
2. Defined bed and bank absent, vegetation composed of upland and FACU species	<input checked="" type="checkbox"/>	WWC
3. Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions	<input checked="" type="checkbox"/>	WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	<input checked="" type="checkbox"/>	WWC
5. Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase	<input checked="" type="checkbox"/>	Stream
6. Presence of fish (except <i>Gambusia</i>)	<input checked="" type="checkbox"/>	Stream
7. Presence of naturally occurring ground water table connection	<input checked="" type="checkbox"/>	Stream
8. Flowing water in channel and 7 days since last precip >0.1" in local watershed	<input checked="" type="checkbox"/>	Stream
9. Evidence watercourse has been used as a supply of drinking water	<input checked="" type="checkbox"/>	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-WPC Guidance For Making Hydrologic Determinations, Version 1.5*

Overall Hydrologic Determination = WWC

Secondary Indicator Score (if applicable) = 12.25

Justification / Notes: WWC was scored in 5 parts - Part 1
Start Lat/Long: 36.607174, -87.237272 End Lat/Long: 36.608615, -87.239193

Secondary Field Indicator Evaluation

A. Geomorphology (Subtotal =)

A. Geomorphology (Subtotal =)	Absent	Weak	Moderate	Strong
1. Continuous bed and bank	0	1	2	3
2. Sinuous channel	0	1	2	3
3. In-channel structure: riffle-pool sequences	0	1	2	3
4. Sorting of soil textures or other substrate	0	1	2	3
5. Active/relic floodplain	0	0.5	1	1.5
6. Depositional bars or benches	0	1	2	3
7. Braided channel	0	1	2	3
8. Recent alluvial deposits	0	0.5	1	1.5
9. Natural levees	0	1	2	3
10. Headcuts	0	1	2	3
11. Grade controls	0	0.5	1	1.5
12. Natural valley or drainageway	0	0.5	1	1.5
13. At least second order channel on existing USGS or NRCS map	No = 0		Yes = 3	

1
1
1
0.5

0.5
0.5
(4.5)

B. Hydrology (Subtotal =)

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

0.5
1
0.5
~~0.75~~
1.5
(4.25)

C. Biology (Subtotal =)

C. Biology (Subtotal =)	Absent	Weak	Moderate	Strong
20. Fibrous roots in channel bed ¹	3	2	①	0
21. Rooted plants in the thalweg ¹	3	②	1	0
22. Crayfish in stream (exclude in floodplain)	0	1	2	3
23. Bivalves/mussels	0	1	2	3
24. Amphibians	0	0.5	1	1.5
25. Macrobenthos (record type & abundance)	0	1	2	3
26. Filamentous algae; periphyton	0	1	2	3
27. Iron oxidizing bacteria/fungus	0	0.5	1	1.5
28. Wetland plants in channel bed ²	0	0.5	1	1.5

1
2
0.5 (3.5)

Focus is on the presence of terrestrial plants.

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

Total Points = 12.25

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

1a) 10YR 4/2 95%, 5% redox 7.5YR 4/6

Notes :

Hydrologic Determination Field Data Sheet

Tennessee Division of Water Pollution Control, Version 1.5

9/13/21

Named Waterbody: 1439-1444 WWC3		Date/Time: 1:00pm
Assessors/Affiliation: Marian Rubin QHP-IT, Kari Keenel Spectrum Environmental		Project ID:
Site Name/Description: Bellamy Property		3299-023-30
Site Location: Clarksville, TN		
HUC (12 digit): 051302060603 - Spring Creek		Lat: 36.608615
Previous Rainfall (7-days): 0"		Long: -87.239193
Precipitation this Season vs. Normal: abnormally wet elevated <u>average</u> low abnormally dry unknown		
Source of recent & seasonal precip data: Wunderground KTNCLARKISO		
Watershed Size: 0.19 sq. mi.		County: Montgomery
Soil Type(s) / Geology: Guthrie Silt Loam / St. Genevieve Limestone		Source: WSS/USGS
Surrounding Land Use: Agricultural / Forested		
Degree of historical alteration to natural channel morphology & hydrology (circle one & describe fully in Notes): Severe Moderate Slight Absent		

Primary Field Indicators Observed

Primary Indicators	NO	YES
1. Hydrologic feature exists solely due to a process discharge	X	WWC
2. Defined bed and bank absent, vegetation composed of upland and FACU species	X	WWC
3. Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions	N/A	WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	X	WWC
5. Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase	X	Stream
6. Presence of fish (except <i>Gambusia</i>)	X	Stream
7. Presence of naturally occurring ground water table connection	X	Stream
8. Flowing water in channel and 7 days since last precip >0.1" in local watershed	X	Stream
9. Evidence watercourse has been used as a supply of drinking water	X	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-WPC Guidance For Making Hydrologic Determinations, Version 1.5

Overall Hydrologic Determination = wwc

Secondary Indicator Score (if applicable) = 8

Justification / Notes: WWC3 was scored in 5 parts - Part 2
 Start Lat/Long: 36.608615, -87.239193 End Lat/Long: 36.609223, -87.239297
 Large debris pile at start of WWC1, field to the South drains into WWC1

Secondary Field Indicator Evaluation

A. Geomorphology (Subtotal =)		Absent	Weak	Moderate	Strong	
1. Continuous bed and bank		0	1	2	3	1.5
2. Sinuous channel		0	1	2	3	0.5
3. In-channel structure: riffle-pool sequences		0	1	2	3	0.5
4. Sorting of soil textures or other substrate		0	1	2	3	1
5. Active/relic floodplain		0	0.5	1	1.5	
6. Depositional bars or benches		0	1	2	3	
7. Braided channel		0	1	2	3	
8. Recent alluvial deposits		0	0.5	1	1.5	0.25
9. Natural levees		0	1	2	3	
10. Headcuts		0	1	2	3	
11. Grade controls		0	0.5	1	1.5	0.25
12. Natural valley or drainageway		0	0.5	1	1.5	0.5
13. At least second order channel on existing USGS or NRCS map		No = 0		Yes = 3		4.5

B. Hydrology (Subtotal =)		Absent	Weak	Moderate	Strong	
14. Subsurface flow/discharge into channel		0	1	2	3	
15. Water in channel and >48 hours since sig. rain		0	1	2	3	
16. Leaf litter in channel (January – September)		1.5	1	0.5	0	0.5
17. Sediment on plants or on debris		0	0.5	1	1.5	
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 channel		No = 0		Yes = 1.5		1

C. Biology (Subtotal =)		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	1.5
22. Crayfish in stream (exclude in floodplain)		0	1	2	3	
23. Bivalves/mussels		0	1	2	3	
24. Amphibians		0	0.5	1	1.5	
25. Macroinvertebrates (record type & abundance)		0	1	2	3	
26. Filamentous algae; periphyton		0	1	2	3	
27. Iron oxidizing bacteria/fungus		0	0.5	1	1.5	
28. Wetland plants in channel bed ²		0	0.5	1	1.5	2.5

¹ Focus is on the presence of terrestrial plants.

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

Total Points = 8

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

Notes: 1) B+B - areas of continuity + areas of interruption 3) long reach of uniform hydraulics
 4) one arc of sorting throughout whole reach. Substrate Sorting not readily observed
 6) completely lacking 7) No recent deposits except one area mentioned in #4
 11) GC present slightly in one area where roots span channel width
 12) mostly indistinct contours 14) No Water in channel, No seeps or springs
 15) see #14 16) 40% 17) No Sediment observed on plants in channel or on banks
 18) Slight indication of plants swayed in downstream direction, occasional debris pile
 19) absent 20) patches of fibrous roots 21) rooted plants in channel every 3-4 paces

Hydrologic Determination Field Data Sheet

Tennessee Division of Water Pollution Control, Version 1.5

9/13/21

Named Waterbody: 1444-1455 WWC3	Date/Time: 1:30 pm
Assessors/Affiliation: Marion Rubin QHP-IT, Kari Kennel Spectrum Environmental	Project ID:
Site Name/Description: Bellamy Property	3299-023-30
Site Location: Clarksville, TN	
HUC (12 digit): 051302060603	Lat: 36.609223
Previous Rainfall (7-days): 0"	Long: -87.239297
Precipitation this Season vs. Normal: abnormally wet elevated (average) low abnormally dry unknown	
Source of recent & seasonal precip data: Wunderground KTNCLARK150	
Watershed Size: 0.19 sq. mi.	County: Montgomery
Soil Type(s) / Geology: Butte Silt loam / Lindell Silt loam / St. Genevieve Limestone	Source: WIS/WIGS
Surrounding Land Use: Agricultural / Forested	
Degree of historical alteration to natural channel morphology & hydrology (circle one & describe fully in Notes): Severe Moderate Slight Absent	

Primary Field Indicators Observed

Primary Indicators	NO	YES
1. Hydrologic feature exists solely due to a process discharge	X	WWC
2. Defined bed and bank absent, vegetation composed of upland and FACU species	X	WWC
3. Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions	N/A	WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	X	WWC
5. Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase	X	Stream
6. Presence of fish (except <i>Gambusia</i>)	X	Stream
7. Presence of naturally occurring ground water table connection	X	Stream
8. Flowing water in channel and 7 days since last precip >0.1 " in local watershed	X	Stream
9. Evidence watercourse has been used as a supply of drinking water	X	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-WPC Guidance For Making Hydrologic Determinations, Version 1.5

Overall Hydrologic Determination = WWC

Secondary Indicator Score (if applicable) = 8.5

Justification / Notes: WWC3 was scored in 5 parts - Part 3

Start Lat/Long: 36.609223, -87.239297 End Lat/Long: 36.609841, -87.239827

Culvert L/w WWC1 part 2 + Part 3 (grassy swale); Culvert packed w/ hay

Secondary Field Indicator Evaluation

A. Geomorphology (Subtotal =)		Absent	Weak	Moderate	Strong	
1. Continuous bed and bank		0	1	2	3	1.5
2. Sinuous channel		0	(1)	2	3	1
3. In-channel structure: riffle-pool sequences		0	(1)	2	3	1
4. Sorting of soil textures or other substrate		0	(1)	2	3	0.5
5. Active/relic floodplain		(0)	0.5	1	1.5	
6. Depositional bars or benches		(0)	1	2	3	
7. Braided channel		(0)	1	2	3	
8. Recent alluvial deposits		(0)	0.5	1	1.5	
9. Natural levees		(0)	1	2	3	
10. Headcuts		(0)	1	2	3	
11. Grade controls		(0)	0.5	1	1.5	
12. Natural valley or drainageway		0	(0.5)	1	1.5	0.5
13. At least second order channel on existing USGS or NRCS map		No = 0		Yes = 3		4.5

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

C. Biology (Subtotal =)		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	
23. Bivalves/mussels		(0)	1	2	3	
24. Amphibians		(0)	0.5	1	1.5	
25. Macrobenthos (record type & abundance)		(0)	1	2	3	
26. Filamentous algae; periphyton		(0)	1	2	3	
27. Iron oxidizing bacteria/fungus		(0)	0.5	1	1.5	
28. Wetland plants in channel bed ²		(0)	0.5	1	1.5	3

¹ Focus is on the presence of terrestrial plants.

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

Total Points = 8.5

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

Notes : 1) areas of continuity + areas of interruption 3) Uniform hydraulics
 4) channel substrate similar to surrounding upland substrate 6) completely lacking
 8) completely absent, no over bank deposition 11) None 12) mostly indistinct
 contours 14) No water, no seeps or springs 15) see #14 16) 40% 17) None
 18) drift piles occasionally 19) No 20) patches of fibrous roots 21) occasional
 rooted plants in channel spaced many paces apart

Hydrologic Determination Field Data Sheet

Tennessee Division of Water Pollution Control, Version 1.5

9/13/21

Named Waterbody: 1455-1472 WWC3	Date/Time: 2:15 pm
Assessors/Affiliation: Marian Rubin QHE-IT, Kari Kennel Spectrum Environmental	Project ID:
Site Name/Description: Bellamy Property	3299-023-30
Site Location: Clarksville, TN	
HUC (12 digit): 051302060603	Lat: 36.609841
Previous Rainfall (7-days): 0"	Long: -87.239827
Precipitation this Season vs. Normal: abnormally wet elevated <u>average</u> low abnormally dry unknown	
Source of recent & seasonal precip data: Wunderground KTNCLARK 150	
Watershed Size: 0.19 sq. mi.	County: Montgomery
Soil Type(s) / Geology: Lindell Silt Loam / St. Genevieve Limestone	Source:
Surrounding Land Use: Agricultural / Forested	
Degree of historical alteration to natural channel morphology & hydrology (circle one & describe fully in Notes): Severe Moderate Slight Absent	

Primary Field Indicators Observed

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

Grassy Swale

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-WPC Guidance For Making Hydrologic Determinations, Version 1.5

Overall Hydrologic Determination = WWC / Grassy Swale

Secondary Indicator Score (if applicable) =

Justification / Notes: WWC 3 was scored in 5 parts- Part 4
Start Lat/Long: 36.609841, -87.239827 End Lat/Long: 36.612933, -87.240245

Secondary Field Indicator Evaluation

A. Geomorphology (Subtotal =)	Absent	Weak	Moderate	Strong
1. Continuous bed and bank	0	1	2	3
2. Sinuous channel	0	1	2	3
3. In-channel structure: riffle-pool sequences	0	1	2	3
4. Sorting of soil textures or other substrate	0	1	2	3
5. Active/relic floodplain	0	0.5	1	1.5
6. Depositional bars or benches	0	1	2	3
7. Braided channel	0	1	2	3
8. Recent alluvial deposits	0	0.5	1	1.5
9. Natural levees	0	1	2	3
10. Headcuts	0	1	2	3
11. Grade controls	0	0.5	1	1.5
12. Natural valley or drainageway	0	0.5	1	1.5
13. At least second order channel on existing USGS or NRCS map	No = 0		Yes = 3	

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

C. Biology (Subtotal =)	Absent	Weak	Moderate	Strong
20. Fibrous roots in channel bed ¹	3	2	1	0
21. Rooted plants in the thalweg ¹	3	2	1	0
22. Crayfish in stream (exclude in floodplain)	0	1	2	3
23. Bivalves/mussels	0	1	2	3
24. Amphibians	0	0.5	1	1.5
25. Macrobenthos (record type & abundance)	0	1	2	3
26. Filamentous algae; periphyton	0	1	2	3
27. Iron oxidizing bacteria/fungus	0	0.5	1	1.5
28. Wetland plants in channel bed ²	0	0.5	1	1.5

¹ Focus is on the presence of terrestrial plants.

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

Total Points =

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

Notes :

[illegible]

Hydrologic Determination Field Data Sheet

Tennessee Division of Water Pollution Control, Version 1.5

9/13/21

Named Waterbody: 1472-1483 WWC3		Date/Time: 2:45pm
Assessors/Affiliation: Marion Rubin QHP-JT, Kari Kennel Spectrum Environmental		Project ID:
Site Name/Description: Bellamy Property		3299-023-30
Site Location: Clarksville, TN		
HUC (12 digit): 051302060603 - Spring Creek		Lat: 36.612933
Previous Rainfall (7-days): 0"		Long: -87.240245
Precipitation this Season vs. Normal: abnormally wet elevated <u>average</u> low abnormally dry unknown		
Source of recent & seasonal precip data: Wunderground KINCLARK ISO		
Watershed Size: 0.39 sq. mi.		County: Montgomery
Soil Type(s) / Geology: Arcington Silt Loam / St. Genevieve Limestone		Source: WSI / user
Surrounding Land Use: Agricultural / Forested		
Degree of historical alteration to natural channel morphology & hydrology (circle one & describe fully in Notes): Severe Moderate Slight Absent		

Primary Field Indicators Observed

Primary Indicators	NO	YES
1. Hydrologic feature exists solely due to a process discharge	x	WWC
2. Defined bed and bank absent, vegetation composed of upland and FACU species	x	WWC
3. Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions	x	WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	x	WWC
5. Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase	x	Stream
6. Presence of fish (except <i>Gambusia</i>)	x	Stream
7. Presence of naturally occurring ground water table connection	x	Stream
8. Flowing water in channel and 7 days since last precip >0.1" in local watershed	x	Stream
9. Evidence watercourse has been used as a supply of drinking water	x	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-WPC Guidance For Making Hydrologic Determinations, Version 1.5

Overall Hydrologic Determination = WWC

Secondary Indicator Score (if applicable) = 11

Justification / Notes: WWC3 was scored in 5 parts part 5
Start Lat/Long: 36.612933, -87.240245 End Lat/Long: 36.615234, -87.240743
downstream of grassy Swale

Secondary Field Indicator Evaluation

A. Geomorphology (Subtotal =)		Absent	Weak	Moderate	Strong
1. Continuous bed and bank		0	1	(2)	3
2. Sinuous channel		0	(1)	2	3
3. In-channel structure: riffle-pool sequences		0	(1)	2	3
4. Sorting of soil textures or other substrate		0	(1)	2	3
5. Active/relic floodplain		(0)	0.5	1	1.5
6. Depositional bars or benches		0	(1)	2	3
7. Braided channel		(0)	1	2	3
8. Recent alluvial deposits		(0)	0.5	1	1.5
9. Natural levees		(0)	1	2	3
10. Headcuts		(0)	1	2	3
11. Grade controls		(0)	0.5	1	1.5
12. Natural valley or drainageway		0	0.5	1	1.5
13. At least second order channel on existing USGS or NRCS map		No = 0		Yes = 3	

0.75

6.75

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

0.5

0.75

1.25

C. Biology (Subtotal =)		Absent	Weak	Moderate	Strong
20. Fibrous roots in channel bed ¹		3	2	(1)	0
21. Rooted plants in the thalweg ¹		3	(2)	1	0
22. Crayfish in stream (exclude in floodplain)		0	1	2	3
23. Bivalves/mussels		0	1	2	3
24. Amphibians		0	0.5	1	1.5
25. Macrobenthos (record type & abundance)		0	1	2	3
26. Filamentous algae; periphyton		0	1	2	3
27. Iron oxidizing bacteria/fungus		0	0.5	1	1.5
28. Wetland plants in channel bed ²		0	0.5	1	1.5

¹ Focus is on the presence of terrestrial plants.

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

3

Total Points = 11

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

Notes : 1) bth more prominent upstream, loses structure downstream; occasional interruptions 3) occasional diversity, mostly uniform hydraulics 4) substrate sorting not readily observed 6) infrequent 8) absent 11) absent 12) slight contour 14) no flow, no seeps or springs 15) see #14 16) 30% 17) none 18) in channel vegetation swayed in direction of flow occasionally + patches of debris piles 19) no 20) patches of fibrous roots 21) few throughout reach - spaced many paces apart

Hydrologic Determination Field Data Sheet

Tennessee Division of Water Pollution Control, Version 1.5

11/15/21

Named Waterbody: <u>WWC 4</u>		Date/Time: <u>8:30 a.m.</u>
Assessors/Affiliation: <u>Marion Rubin QHP-IT, Kari Kennel QHP-IT</u>		Project ID: <u>3299-023-30</u>
Site Name/Description: <u>Bellamy Property</u>		
Site Location: <u>Clarksville, TN</u>		
HUC (12 digit): <u>051302060603 - Spring Creek</u>		Lat: <u>36.615342</u>
Previous Rainfall (7-days): <u>0.32"</u>		Long: <u>-87.241027</u>
Precipitation this Season vs. Normal: <u>abnormally wet</u> <u>elevated</u> <u>average</u> <u>low</u> <u>abnormally dry</u> <u>unknown</u>		
Source of recent & seasonal precip data: <u>Wunder-ground</u> <u>KTNCLARK15b</u>		
Watershed Size: <u>0.40</u> sq. mi.		County: <u>Montgomery</u>
Soil Type(s) / Geology: <u>Accretion Silt loam / St. Genevieve Limestone</u>		Source: <u>WSS/v365</u>
Surrounding Land Use: <u>Agricultural / Forested</u>		
Degree of historical alteration to natural channel morphology & hydrology (circle one & describe fully in Notes): Severe Moderate Slight Absent		

Primary Field Indicators Observed

Primary Indicators	NO	YES
1. Hydrologic feature exists solely due to a process discharge	<input checked="" type="checkbox"/>	WWC
2. Defined bed and bank absent, vegetation composed of upland and FACU species	<input checked="" type="checkbox"/>	WWC
3. Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions	<input checked="" type="checkbox"/>	WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	<input checked="" type="checkbox"/>	WWC
5. Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase	<input checked="" type="checkbox"/>	Stream
6. Presence of fish (except <i>Gambusia</i>)	<input checked="" type="checkbox"/>	Stream
7. Presence of naturally occurring ground water table connection	<input checked="" type="checkbox"/>	Stream
8. Flowing water in channel and 7 days since last precip >0.1" in local watershed	<input checked="" type="checkbox"/>	Stream
9. Evidence watercourse has been used as a supply of drinking water	<input checked="" type="checkbox"/>	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-WPC Guidance For Making Hydrologic Determinations, Version 1.5*

Overall Hydrologic Determination = WWC

Secondary Indicator Score (if applicable) = 13.25

Justification / Notes :

Secondary Field Indicator Evaluation

A. Geomorphology (Subtotal =)

	Absent	Weak	Moderate	Strong
1. Continuous bed and bank	0	1	2	3
2. Sinuous channel	0	1	2	3
3. In-channel structure: riffle-pool sequences	0	1	2	3
4. Sorting of soil textures or other substrate	0	1	2	3
5. Active/relic floodplain	0	0.5	1	1.5
6. Depositional bars or benches	0	1	2	3
7. Braided channel	0	1	2	3
8. Recent alluvial deposits	0	0.5	1	1.5
9. Natural levees	0	1	2	3
10. Headcuts	0	1	2	3
11. Grade controls	0	0.5	1	1.5
12. Natural valley or drainageway	0	0.5	1	1.5
13. At least second order channel on existing USGS or NRCS map	No = 0		Yes = 3	

= 7.75

B. Hydrology (Subtotal =)

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

= 2.5

C. Biology (Subtotal =)

	Absent	Weak	Moderate	Strong
20. Fibrous roots in channel bed ¹	3	2	1	0
21. Rooted plants in the thalweg ¹	3	2	1	0
22. Crayfish in stream (exclude in floodplain)	0	1	2	3
23. Bivalves/mussels	0	1	2	3
24. Amphibians	0	0.5	1	1.5
25. Macroinvertebrates (record type & abundance)	0	1	2	3
26. Filamentous algae; periphyton	0	1	2	3
27. Iron oxidizing bacteria/fungus	0	0.5	1	1.5
28. Wetland plants in channel bed ²	0	0.5	1	1.5

3

¹ Focus is on the presence of terrestrial plants.

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

10.75
+ 2.50
13.25

Total Points = 13.25

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

Notes: 1. Bed and Bank Continuous - few interruptions

11. Medium to large tree roots act as grade control

16. Leaf Litter in channel approx. 75% coverage

Hydrologic Determination Field Data Sheet Tennessee Division of Water Pollution Control, Version 1.5

11/15/21

Named Waterbody: <u>WWC 5</u>		Date/Time: <u>9:00</u>
Assessors/Affiliation: <u>Morion Rubin QHP-IT, Kari Kenner QHP-IT</u>		Project ID: <u>3299-023-30</u>
Site Name/Description: <u>Bellamy Property</u>		
Site Location: <u>Clarksville, TN</u>		
HUC (12 digit): <u>051302060603</u>	Lat: <u>36.614951</u>	
Previous Rainfall (7-days): <u>0.32"</u>	Long: <u>-87.24202</u>	
Precipitation this Season vs. Normal: <u>abnormally wet</u> elevated <u>(average)</u> low <u>abnormally dry</u> unknown		
Source of recent & seasonal precip data: <u>Wunderground KTNCLARKISO</u>		
Watershed Size: <u>0.40 sq mi</u>	County: <u>Montgomery</u>	
Soil Type(s) / Geology: <u>Acrington Silt Loam / St Genevieve Limestone</u>	Source: <u>VJ65</u>	
Surrounding Land Use: <u>Agricultural / Forested</u>		
Degree of historical alteration to natural channel morphology & hydrology (circle one & describe fully in Notes): Severe Moderate Slight Absent		

Primary Field Indicators Observed

Primary Indicators	NO	YES
1. Hydrologic feature exists solely due to a process discharge	X	WWC
2. Defined bed and bank absent, vegetation composed of upland and FACU species	X	WWC
3. Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions	X	WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	X	WWC
5. Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase	X	Stream
6. Presence of fish (except <i>Gambusia</i>)	X	Stream
7. Presence of naturally occurring ground water table connection	X	Stream
8. Flowing water in channel and 7 days since last precip >0.1" in local watershed	X	Stream
9. Evidence watercourse has been used as a supply of drinking water	X	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-WPC Guidance For Making Hydrologic Determinations, Version 1.5*

Overall Hydrologic Determination = WWC

Secondary Indicator Score (if applicable) = 10.75

Justification / Notes :

Secondary Field Indicator Evaluation

A. Geomorphology (Subtotal = 6.75)

A. Geomorphology (Subtotal = 6.75)		Absent	Weak	Moderate	Strong
1. Continuous bed and bank		0	1	2	3
2. Sinuous channel		0	1	2	3
3. In-channel structure: riffle-pool sequences		0	1	2	3
4. Sorting of soil textures or other substrate		0	1	2	3
5. Active/relic floodplain		0	0.5	1	1.5
6. Depositional bars or benches		0	1	2	3
7. Braided channel		0	1	2	3
8. Recent alluvial deposits		0	0.5	1	1.5
9. Natural levees		0	1	2	3
10. Headcuts		0	1	2	3
11. Grade controls		0	0.5	1	1.5
12. Natural valley or drainageway		0	0.5	1	1.5
13. At least second order channel on existing USGS or NRCS map		No = 0		Yes = 3	

B. Hydrology (Subtotal = 2)

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

C. Biology (Subtotal = 2)

C. Biology (Subtotal = 2)	Absent	Weak	Moderate	Strong
20. Fibrous roots in channel bed ¹	3	2	1	0
21. Rooted plants in the thalweg ¹	3	2	1	0
22. Crayfish in stream (exclude in floodplain)	0	1	2	3
23. Bivalves/mussels	0	1	2	3
24. Amphibians	0	0.5	1	1.5
25. Macrobenthos (record type & abundance)	0	1	2	3
26. Filamentous algae; periphyton	0	1	2	3
27. Iron oxidizing bacteria/fungus	0	0.5	1	1.5
28. Wetland plants in channel bed ²	0	0.5	1	1.5

Focus is on the presence of terrestrial plants.

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

Total Points = 10.75

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

Notes :

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.

Hydrologic Determination Field Data Sheet Tennessee Division of Water Pollution Control, Version 1.5 11/8/21

Named Waterbody: <u>WWC 6</u>		Date/Time: <u>2:00</u>
Assessors/Affiliation: <u>Marion Rubin QHP-IT, Kari Kennel QHP-IT</u>		Project ID: <u>3299-023-30</u>
Site Name/Description: <u>Bellamy Property</u>		
Site Location: <u>Clarksville, TN</u>		
HUC (12 digit): <u>051302060603</u>		Lat: <u>36.610847</u>
Previous Rainfall (7-days): <u>0.03"</u>		Long: <u>-87.28903</u>
Precipitation this Season vs. Normal: abnormally wet elevated <u>average</u> low abnormally dry unknown		
Source of recent & seasonal precip data: <u>Wunderground KTNCLARKISO</u>		
Watershed Size: <u>.03 sq. mi</u>		County: <u>Montgomery</u>
Soil Type(s) / Geology: <u>Dickson Silt Loam / ft. Genevieve Limestone</u>		Source: <u>WSS 0365</u>
Surrounding Land Use: <u>Agricultural / Forested</u>		
Degree of historical alteration to natural channel morphology & hydrology (circle one & describe fully in Notes): <div style="display: flex; justify-content: space-around;"> Severe Moderate Slight Absent </div>		

Primary Field Indicators Observed

Primary Indicators	NO	YES
1. Hydrologic feature exists solely due to a process discharge	X	WWC
2. Defined bed and bank absent, vegetation composed of upland and FACU species	X	WWC
3. Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions	X	WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	X	WWC
5. Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase	X	Stream
6. Presence of fish (except <i>Gambusia</i>)	X	Stream
7. Presence of naturally occurring ground water table connection	X	Stream
8. Flowing water in channel and 7 days since last precip >0.1" in local watershed	X	Stream
9. Evidence watercourse has been used as a supply of drinking water	X	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-WPC Guidance For Making Hydrologic Determinations, Version 1.5*

Overall Hydrologic Determination = WWC

Secondary Indicator Score (if applicable) = 11

Justification / Notes :

Secondary Field Indicator Evaluation

A. Geomorphology (Subtotal = 6.5)

	Absent	Weak	Moderate	Strong
1. Continuous bed and bank	0	1	2	3
2. Sinuous channel	0	1	2	3
3. In-channel structure: riffle-pool sequences	0	1	2	3
4. Sorting of soil textures or other substrate	0	1	2	3
5. Active/relic floodplain	0	0.5	1	1.5
6. Depositional bars or benches	0	1	2	3
7. Braided channel	0	1	2	3
8. Recent alluvial deposits	0	0.5	1	1.5
9. Natural levees	0	1	2	3
10. Headcuts	0	1	2	3
11. Grade controls	0	0.5	1	1.5
12. Natural valley or drainageway	0	0.5	1	1.5
13. At least second order channel on existing USGS or NRCS map	No = 0		Yes = 3	

B. Hydrology (Subtotal = 2)

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

C. Biology (Subtotal = 2.5)

	Absent	Weak	Moderate	Strong
20. Fibrous roots in channel bed ¹	3	2	1	0
21. Rooted plants in the thalweg ¹	3	2	1	0
22. Crayfish in stream (exclude in floodplain)	0	1	2	3
23. Bivalves/mussels	0	1	2	3
24. Amphibians	0	0.5	1	1.5
25. Macroinvertebrates (record type & abundance)	0	1	2	3
26. Filamentous algae; periphyton	0	1	2	3
27. Iron oxidizing bacteria/fungus	0	0.5	1	1.5
28. Wetland plants in channel bed ²	0	0.5	1	1.5

¹Focus is on the presence of terrestrial plants.

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

Total Points = 11

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

Notes: 8) Small amount of alluvial deposits observed

14) No standing water, flow, or pools

16) Leaf litter approx 30%

Hydrologic Determination Field Data Sheet Tennessee Division of Water Pollution Control, Version 1.5

11/8/21

Named Waterbody: <u>WWC 7</u> GPS <u>218-224</u>		Date/Time: <u>3/0 p.m.</u>
Assessors/Affiliation: <u>Marion Rubin QHP-IT, Kari Kennel QHP-IT</u>		Project ID: <u>3299-023-30</u>
Site Name/Description: <u>Bellamy Property</u>		
Site Location: <u>Clarksville, TN</u>		
HUC (12 digit): <u>051302060603- Spring Creek</u>		Lat: <u>36.611000</u>
Previous Rainfall (7-days): <u>0.03"</u>		Long: <u>-87.238549</u>
Precipitation this Season vs. Normal: <u>abnormally wet</u> <u>elevated</u> <u>(average)</u> <u>low</u> <u>abnormally dry</u> <u>unknown</u>		
Source of recent & seasonal precip data: <u>Wunderground KTNCLARK150</u>		
Watershed Size: <u>0.03 sq. mi.</u>		County: <u>Montgomery</u>
Soil Type(s) / Geology: <u>Guthrie Silt Loam / St Genevieve Limestone</u>		Source: <u>WSS/USGS</u>
Surrounding Land Use: <u>Agricultural / Forested</u>		
Degree of historical alteration to natural channel morphology & hydrology (circle one & describe fully in Notes): Severe Moderate Slight Absent		

Primary Field Indicators Observed

Primary Indicators	NO	YES
1. Hydrologic feature exists solely due to a process discharge	<input checked="" type="checkbox"/>	WWC
2. Defined bed and bank absent, vegetation composed of upland and FACU species	<input checked="" type="checkbox"/>	WWC
3. Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions	N/A	WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	N/A	WWC
5. Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase	<input checked="" type="checkbox"/>	Stream
6. Presence of fish (except <i>Gambusia</i>)	<input checked="" type="checkbox"/>	Stream
7. Presence of naturally occurring ground water table connection	<input checked="" type="checkbox"/>	Stream
8. Flowing water in channel and 7 days since last precip >0.1" in local watershed	<input checked="" type="checkbox"/>	Stream
9. Evidence watercourse has been used as a supply of drinking water	<input checked="" type="checkbox"/>	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-WPC Guidance For Making Hydrologic Determinations, Version 1.5*

Overall Hydrologic Determination = WWC

Secondary Indicator Score (if applicable) = 16.5

Justification / Notes :

Secondary Field Indicator Evaluation

A. Geomorphology (Subtotal = 625)

A. Geomorphology (Subtotal = 6.5)	Absent	Weak	Moderate	Strong
1. Continuous bed and bank	0	1	2	3
2. Sinuous channel	0	1	2	3
3. In-channel structure: riffle-pool sequences	0	1	2	3
4. Sorting of soil textures or other substrate	0	1	2	3
5. Active/relic floodplain	0	0.5	1	1.5
6. Depositional bars or benches	0	1	2	3
7. Braided channel	0	1	2	3
8. Recent alluvial deposits	0	0.5	1	1.5
9. Natural levees	0	1	2	3
10. Headcuts	0	1	2	3
11. Grade controls	0	0.5	1	1.5
12. Natural valley or drainageway	0	0.5	1	1.5
13. At least second order channel on existing USGS or NRCS map	No = 0		Yes = 3	

B. Hydrology (Subtotal = 225)

B. Hydrology (Subtotal = 2.25)	Absent	Weak	Moderate	Strong
14. Subsurface flow/discharge into channel	0	1	2	3
15. Water in channel and >48 hours since sig. rain	0	1	2	3
16. Leaf litter in channel (January – September)	1.5	1	0.5	0
17. Sediment on plants or on debris	0	0.5	1	1.5
18. Organic debris lines or piles (wrack lines)	0	0.5	1	1.5
19. Hydric soils in channel bed or sides of channel	No = 0		Yes = 1.5	

C. Biology (Subtotal = 4)

C. Biology (Subtotal = 4)	Absent	Weak	Moderate	Strong
20. Fibrous roots in channel bed ¹	3	2	1	0
21. Rooted plants in the thalweg ¹	3	2	1	0
22. Crayfish in stream (exclude in floodplain)	0	1	2	3
23. Bivalves/mussels	0	1	2	3
24. Amphibians	0	0.5	1	1.5
25. Macrobenthos (record type & abundance)	0	1	2	3
26. Filamentous algae; periphyton	0	1	2	3
27. Iron oxidizing bacteria/fungus	0	0.5	1	1.5
28 Wetland plants in channel bed ²	0	0.5	1	1.5

¹Focus is on the presence of terrestrial plants.

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

Total Points = 16.5

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

19) 10 YR 1/2 98%, 21 Redox 7.5 Yr 4/6

Notes :

APPENDIX E

Wetland Datasheets

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Bellamy Property City/County: Clarksville, Montgomery County Sampling Date: 2021-11-08
Applicant/Owner: Provident Realty Advisors State: Tennessee Sampling Point: Up A
Investigator(s): Marian Rubin & Kari Kennel; Spectrum Environmental, Inc. Section, Township, Range: N/A
Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Linear Slope (%): 2
Subregion (LRR or MLRA): N 122 Lat: 36.608319 Long: -87.244112 Datum: NAD 83
Soil Map Unit Name: DsB - Dickson silt loam, 2 to 5 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☒, Soil ☒, or Hydrology ☒ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			

Remarks:

According to the Normal Weather Conditions calculation utilized for TDEC HD submittals, the prior period (past three months) has been normal; the area in which this upland pit was taken has been historically altered for the agricultural purposes, specifically for the creation of a pond (Pond 1). The vegetation around Pond 1 is mowed routinely.

HYDROLOGY

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

Field Observations:

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

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: Up A

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>NaN</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
<u>0%</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>10</u></td> <td>x 5 = <u>50</u></td> </tr> <tr> <td>Column Totals: <u>20</u> (A)</td> <td><u>90</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>4.50</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>10</u>	x 5 = <u>50</u>	Column Totals: <u>20</u> (A)	<u>90</u> (B)	Prevalence Index = B/A = <u>4.50</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>10</u>	x 4 = <u>40</u>																			
UPL species <u>10</u>	x 5 = <u>50</u>																			
Column Totals: <u>20</u> (A)	<u>90</u> (B)																			
Prevalence Index = B/A = <u>4.50</u>																				
Sapling/Shrub Stratum (Plot size: <u>15</u>) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ <div style="text-align: right;"> _____ = Total Cover 50% of total cover: _____ 20% of total cover: _____ </div>																				
Herb Stratum (Plot size: <u>5</u>) 1. <u>Glycine max</u> <u>60</u> <u>✓</u> _____ 2. <u>Dactylis glomerata</u> <u>10</u> _____ <u>FACU</u> 3. <u>Stellaria media</u> <u>10</u> _____ <u>UPL</u> 4. <u>Lamium purpureum</u> <u>5</u> _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____ <div style="text-align: right;"> <u>85%</u> = Total Cover 50% of total cover: <u>42.5</u> 20% of total cover: <u>17</u> </div>																				
Woody Vine Stratum (Plot size: <u>15</u>) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ <div style="text-align: right;"> _____ = Total Cover 50% of total cover: _____ 20% of total cover: _____ </div>																				
Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																				
				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.																
Hydrophytic Vegetation Present? Yes _____ No <u>✓</u>																				

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

Note - soybean crop listed was recently harvested and the reported coverage percentages reflect coverage post harvest. Glycine max and Lamium purpureum did not have a indicator status listed on the USDA website.

SOIL

Sampling Point: Up A

[illegible]

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Bellamy Property City/County: Clarksville, Montgomery County Sampling Date: 2021-11-08
 Applicant/Owner: Provident Realty Advisors State: Tennessee Sampling Point: Up B
 Investigator(s): Marian Rubin & Kari Kennel; Spectrum Environmental, Inc. Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR or MLRA): N 122 Lat: 36.604702 Long: -87.242891 Datum: NAD 83
 Soil Map Unit Name: Gu - Guthrie silt loam, 0 to 2 percent slopes, occasionally ponded NWI classification: Freshwater Emergent Wetland habitat is classified as a PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☒, Soil ☒, or Hydrology ☒ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			

Remarks:

While the NWI map reflects this area as Freshwater Emergent Wetland habitat is classified as a PEM1C, the soil pit was dug upgradient of the NWI mapped wetland in an area that is not wetland. According to the Normal Weather Conditions calculation utilized for TDEC HD submittals, the prior period (past three months) has been normal; the area in which this upland pit was taken has been historically altered for the agricultural purposes, specifically for the creation of a pond (Pond 3/Wetland B). The vegetation around Pond 3 is mowed routinely and utilized for soybean production.

HYDROLOGY

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

Field Observations:

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

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: Up B

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>NaN</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
_____ = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
50% of total cover: _____ 20% of total cover: _____																		
Sapling/Shrub Stratum (Plot size: _____)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
_____ = Total Cover				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain)														
50% of total cover: _____ 20% of total cover: _____																		
Herb Stratum (Plot size: _____)																		
1. <u>Glycine max</u>	<u>90</u>	<u>✓</u>	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
_____ = Total Cover				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
50% of total cover: <u>45</u> 20% of total cover: <u>18</u>																		
Woody Vine Stratum (Plot size: _____)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
_____ = Total Cover				Hydrophytic Vegetation Present? Yes _____ No <u>✓</u>														
50% of total cover: _____ 20% of total cover: _____																		

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

Note - soybean crop listed was recently harvested and the reported coverage percentages reflect coverage post harvest. Glycine max did not have a indicator status listed on the USDA website.

SOIL

Sampling Point: Up B

[illegible]

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Bellamy Property City/County: Clarksville, Montgomery County Sampling Date: 2021-11-08
Applicant/Owner: Provident Realty Advisors State: Tennessee Sampling Point: Up C
Investigator(s): Marian Rubin & Kari Kennel; Spectrum Environmental, Inc. Section, Township, Range: N/A
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0
Subregion (LRR or MLRA): N 122 Lat: 36.611223 Long: -87.238889 Datum: NAD 83
Soil Map Unit Name: GuGuthrie silt loam, 0 to 2 percent slopes, occasionally ponded NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☒, Soil ☒, or Hydrology ☒ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Remarks:

According to the Normal Weather Conditions calculation utilized for TDEC HD submittals, the prior period (past three months) has been normal; the area in which this uplandpit was taken has been historically altered for the agricultural purposes, specifically for the creation of a pond between 1955 and 1981. The vegetation around and upgradient of Wetland C is mowed routinely and utilized for soybean production

HYDROLOGY

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

Field Observations:

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

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: Up C

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Quercus palustris</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)														
2. <u>Liquidambar styraciflua</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FAC</u>															
3. <u>Acer negundo</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>20%</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>17</u></td> <td>x 2 = <u>34</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 = <u>30</u></td> </tr> <tr> <td>FACU species <u>35</u></td> <td>x 4 = <u>140</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>62</u> (A)</td> <td><u>204</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.29</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>17</u>	x 2 = <u>34</u>	FAC species <u>10</u>	x 3 = <u>30</u>	FACU species <u>35</u>	x 4 = <u>140</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>62</u> (A)	<u>204</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>17</u>	x 2 = <u>34</u>																	
FAC species <u>10</u>	x 3 = <u>30</u>																	
FACU species <u>35</u>	x 4 = <u>140</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>62</u> (A)	<u>204</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u>)																		
1. <u>Lonicera japonica</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACU</u>															
2. <u>Juniperus virginiana</u>	<u>5</u>	_____	<u>FACU</u>															
3. <u>Celtis laevigata</u>	<u>5</u>	_____	<u>FACW</u>															
4. <u>Quercus palustris</u>	<u>2</u>	_____	<u>FACW</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
<u>27%</u> = Total Cover 50% of total cover: <u>13.5</u> 20% of total cover: <u>5.4</u>																		
Herb Stratum (Plot size: <u>5</u>)																		
1. <u>Glycine max</u>	<u>80</u>	<input checked="" type="checkbox"/>	_____	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)														
2. <u>Dactylis glomerata</u>	<u>15</u>	_____	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
<u>95%</u> = Total Cover 50% of total cover: <u>47.5</u> 20% of total cover: <u>19</u>																		
Woody Vine Stratum (Plot size: <u>15</u>)																		
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____																		

Hydrophytic Vegetation Present? Yes _____ No ☒

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

Glycine max did not have an indicator status listed on the USDA website.

SOIL

Sampling Point: Up C

[illegible]

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Bellamy Property City/County: Clarksville, Montgomery County Sampling Date: 2021-11-15
 Applicant/Owner: Provident Realty Advisors State: Tennessee Sampling Point: Up D1
 Investigator(s): Marian Rubin & Kari Kennel; Spectrum Environmental, Inc. Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Linear Slope (%): 2
 Subregion (LRR or MLRA): N 122 Lat: 36.608088 Long: -87.238011 Datum: NAD 83
 Soil Map Unit Name: DsB - Dickson silt loam, 2 to 5 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☒, Soil ☒, or Hydrology ☒ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			

Remarks:

According to the Normal Weather Conditions calculation utilized for TDEC HD submittals, the prior period (past three months) has been normal; the area downgradient of this upland pit has been historically altered for the agricultural purposes, specifically for the creation of a pond 4, which hydrologically contributes to Wet D, between 1955 and 1981. The vegetation around and upgradient of Pond 4/Wetland D is mowed routinely and utilized for soybean production.

HYDROLOGY

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

Field Observations:		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: Up D1

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Celtis laevigata</u>	<u>35</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)														
2. <u>Carya ovata</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
45% = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>35</u></td> <td>x 2 = <u>70</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>45</u></td> <td>x 4 = <u>180</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>85</u> (A)</td> <td><u>265</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.12</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>35</u>	x 2 = <u>70</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>45</u>	x 4 = <u>180</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>85</u> (A)	<u>265</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>35</u>	x 2 = <u>70</u>																	
FAC species <u>5</u>	x 3 = <u>15</u>																	
FACU species <u>45</u>	x 4 = <u>180</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>85</u> (A)	<u>265</u> (B)																	
50% of total cover: <u>22.5</u> 20% of total cover: <u>9</u>																		
Sapling/Shrub Stratum (Plot size: <u>15</u>)																		
1. <u>Lonicera japonica</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FACU</u>															
2. <u>Asimina triloba</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
15% = Total Cover																		
50% of total cover: <u>7.5</u> 20% of total cover: <u>3</u>																		
Herb Stratum (Plot size: <u>5</u>)																		
1. <u>Glycine max</u>	<u>45</u>	<input checked="" type="checkbox"/>	_____															
2. <u>Lonicera japonica</u>	<u>10</u>	_____	<u>FACU</u>															
3. <u>Hackelia virginiana</u>	<u>5</u>	_____	<u>FACU</u>															
4. <u>Perilla frutescens</u>	<u>5</u>	_____	<u>FACU</u>															
5. <u>Ageratina altissima</u>	<u>5</u>	_____	<u>FACU</u>															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
70% = Total Cover																		
50% of total cover: <u>35</u> 20% of total cover: <u>14</u>																		
Woody Vine Stratum (Plot size: <u>15</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
_____ = Total Cover																		
50% of total cover: _____ 20% of total cover: _____																		
Remarks: (Include photo numbers here or on a separate sheet.) Note - soybean crop listed was recently harvested and the reported coverage percentages reflect coverage post harvest. Glycine max did not have an indicator status listed on the USDA website.																		

Hydrophytic Vegetation Indicators:
 ___ 1 - Rapid Test for Hydrophytic Vegetation
 ___ 2 - Dominance Test is >50%
 ___ 3 - Prevalence Index is ≤3.0¹
 ___ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 ___ Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes _____ No ☒

SOIL

Sampling Point: Up D1

[illegible]

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Bellamy Property City/County: Clarksville, Montgomery County Sampling Date: 2021-11-15
Applicant/Owner: Provident Realty Advisors State: Tennessee Sampling Point: Up D2
Investigator(s): Marian Rubin & Kari Kennel; Spectrum Environmental, Inc. Section, Township, Range: N/A
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0
Subregion (LRR or MLRA): N 122 Lat: 36.607181 Long: -87.237554 Datum: NAD 83
Soil Map Unit Name: Gu - Guthrie silt loam, 0 to 2 percent slopes, occasionally ponded NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☒, Soil ☒, or Hydrology ☒ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Remarks:

According to the Normal Weather Conditions calculation utilized for TDEC HD submittals, the prior period (past three months) has been normal; the area in which this upland pit was taken has been historically altered for installation of TVA lines and the railroad tracks forming the southeastern property boundary. Based on historical aerials, this area appears to be mowed routinely.

HYDROLOGY

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

Field Observations:	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: Up D2

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
_____ = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>7</u></td> <td>x 2 = <u>14</u></td> </tr> <tr> <td>FAC species <u>35</u></td> <td>x 3 = <u>105</u></td> </tr> <tr> <td>FACU species <u>20</u></td> <td>x 4 = <u>80</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>62</u> (A)</td> <td><u>199</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.21</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>7</u>	x 2 = <u>14</u>	FAC species <u>35</u>	x 3 = <u>105</u>	FACU species <u>20</u>	x 4 = <u>80</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>62</u> (A)	<u>199</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>7</u>	x 2 = <u>14</u>																	
FAC species <u>35</u>	x 3 = <u>105</u>																	
FACU species <u>20</u>	x 4 = <u>80</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>62</u> (A)	<u>199</u> (B)																	
50% of total cover: _____ 20% of total cover: _____																		
Sapling/Shrub Stratum (Plot size: <u>15</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
_____ = Total Cover				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain)														
50% of total cover: _____ 20% of total cover: _____																		
Herb Stratum (Plot size: <u>5</u>)																		
1. <u>Solidago altissima</u>	<u>20</u>	<u>✓</u>	<u>FACU</u>															
2. <u>Sporobolus airoides</u>	<u>15</u>	<u>✓</u>	<u>FAC</u>															
3. <u>Pycnanthemum muticum</u>	<u>10</u>		<u>FAC</u>															
4. <u>Xanthium strumarium</u>	<u>10</u>		<u>FAC</u>															
5. <u>Bidens aristosa</u>	<u>5</u>		<u>FACW</u>															
6. <u>Boehmeria cylindrica</u>	<u>2</u>		<u>FACW</u>															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
<u>62%</u> = Total Cover																		
50% of total cover: <u>31</u> 20% of total cover: <u>12.4</u>																		
Woody Vine Stratum (Plot size: <u>15</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
_____ = Total Cover																		
50% of total cover: _____ 20% of total cover: _____																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes _____ No ✓

SOIL

Sampling Point: Up D2

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 4	10YR 3/1	100					Silt Loam	
4 - 9	10YR 5/2	98	7.5YR 4/6	2	C	M	Silt Loam	
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

- ☐ Dark Surface (S7)
☐ Polyvalue Below Surface (S8) (**MLRA 147, 148**)
☐ Thin Dark Surface (S9) (**MLRA 147, 148**)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Iron-Manganese Masses (F12) (**LRR N, MLRA 136**)
☐ Umbric Surface (F13) (**MLRA 136, 122**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 148**)
☐ Red Parent Material (F21) (**MLRA 127, 147**)

Indicators for Problematic Hydric Soils³:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Bellamy Property City/County: Clarksville, Montgomery County Sampling Date: 2021-09-13
Applicant/Owner: Provident Realty Advisors State: Tennessee Sampling Point: Up E
Investigator(s): Marian Rubin & Kari Kennel; Spectrum Environmental, Inc. Section, Township, Range: N/A
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0
Subregion (LRR or MLRA): N 122 Lat: 36.609074 Long: -87.238938 Datum: NAD 83
Soil Map Unit Name: Gu - Guthrie silt loam, 0 to 2 percent slopes, occasionally ponded NWI classification: Freshwater Forested/Shrub Wetland habitat is classified as a PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			

Remarks:

While the NWI map reflects this area as Freshwater Emergent Wetland habitat is classified as a PEM1C, the soil data did not reflect that of wetland soil. This pit was dug in a dry ephemeral stream channel (WWC for TDEC). While hydrology in the form of drainage/flow path was observed, hydrophytic vegetation/hydric soils were not observed. According to the Normal Weather Conditions calculation utilized for TDEC HD submittals, the prior period (past three months) has been normal; the area adjacent to where this upland pit was taken has been historically altered for the agricultural purposes, specifically for soybean production.

HYDROLOGY

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

Field Observations:	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: Up E

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Celtis laevigata</u>	<u>65</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
65% = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>95</u></td> <td>x 2 = <u>190</u></td> </tr> <tr> <td>FAC species <u>20</u></td> <td>x 3 = <u>60</u></td> </tr> <tr> <td>FACU species <u>50</u></td> <td>x 4 = <u>200</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>165</u> (A)</td> <td><u>450</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.73</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>95</u>	x 2 = <u>190</u>	FAC species <u>20</u>	x 3 = <u>60</u>	FACU species <u>50</u>	x 4 = <u>200</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>165</u> (A)	<u>450</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>95</u>	x 2 = <u>190</u>																	
FAC species <u>20</u>	x 3 = <u>60</u>																	
FACU species <u>50</u>	x 4 = <u>200</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>165</u> (A)	<u>450</u> (B)																	
50% of total cover: <u>32.5</u> 20% of total cover: <u>13</u>																		
Sapling/Shrub Stratum (Plot size: <u>15</u>)																		
1. <u>Celtis laevigata</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FACW</u>															
2. <u>Ligustrum sinense</u>	<u>25</u>	<input checked="" type="checkbox"/>	<u>FACU</u>															
3. <u>Symphoricarpos orbiculatus</u>	<u>10</u>	_____	<u>FACU</u>															
4. <u>Carya tomentosa</u>	<u>5</u>	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
70% = Total Cover																		
50% of total cover: <u>35</u> 20% of total cover: <u>14</u>																		
Herb Stratum (Plot size: <u>5</u>)																		
1. <u>Ageratina altissima</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Persicaria longiseta</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>															
3. <u>Microstegium vimineum</u>	<u>5</u>	_____	<u>FAC</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
35% = Total Cover																		
50% of total cover: <u>17.5</u> 20% of total cover: <u>7</u>																		
Woody Vine Stratum (Plot size: <u>15</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
_____ = Total Cover																		
50% of total cover: _____ 20% of total cover: _____																		

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

Glycine max and Carya tomentosa did not have an indicator status listed on the USDA website.

SOIL

Sampling Point: Up E

[illegible]

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Bellamy Property City/County: Clarksville, Montgomery County Sampling Date: 2021-09-13
Applicant/Owner: Provident Realty Advisors State: Tennessee Sampling Point: Up F
Investigator(s): Marian Rubin & Kari Kennel; Spectrum Environmental, Inc. Section, Township, Range: N/A
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0
Subregion (LRR or MLRA): N 122 Lat: 36.609676 Long: -87.239255 Datum: NAD 83
Soil Map Unit Name: Gu - Guthrie silt loam, 0 to 2 percent slopes, occasionally ponded NWI classification: Freshwater Forested/Shrub Wetland habitat is classified as a PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			

Remarks:

While the NWI map reflects this area as Freshwater Emergent Wetland habitat is classified as a PEM1C, the soil data did not reflect that of wetland soil. Hydrology/hydrophytic vegetation/hydric soils were not observed. According to the Normal Weather Conditions calculation utilized for TDEC HD submittals, the prior period (past three months) has been normal; the area adjacent to where this upland pit was taken has been historically altered for the agricultural purposes, specifically for soybean production.

HYDROLOGY

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

Field Observations:

Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____	

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: Up F

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Celtis laevigata</u>	<u>45</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>62.5</u> (A/B)														
2. <u>Gaultheria procumbens</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>FACU</u>															
3. <u>Ulmus alata</u>	<u>5</u>		<u>FACU</u>															
4. _____																		
5. _____																		
6. _____																		
7. _____																		
<u>90%</u> = Total Cover 50% of total cover: <u>45</u> 20% of total cover: <u>18</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>65</u></td> <td>x 2 = <u>130</u></td> </tr> <tr> <td>FAC species <u>70</u></td> <td>x 3 = <u>210</u></td> </tr> <tr> <td>FACU species <u>110</u></td> <td>x 4 = <u>440</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>245</u> (A)</td> <td><u>780</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.18</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>65</u>	x 2 = <u>130</u>	FAC species <u>70</u>	x 3 = <u>210</u>	FACU species <u>110</u>	x 4 = <u>440</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>245</u> (A)	<u>780</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>65</u>	x 2 = <u>130</u>																	
FAC species <u>70</u>	x 3 = <u>210</u>																	
FACU species <u>110</u>	x 4 = <u>440</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>245</u> (A)	<u>780</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u>)																		
1. <u>Asimina triloba</u>	<u>25</u>	<input checked="" type="checkbox"/>	<u>FAC</u>															
2. <u>Celtis laevigata</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACW</u>															
3. <u>Nyssa sylvatica</u>	<u>10</u>		<u>FAC</u>															
4. <u>Ulmus alata</u>	<u>10</u>		<u>FACU</u>															
5. <u>Cercis canadensis</u>	<u>10</u>		<u>FACU</u>															
6. <u>Carya tomentosa</u>																		
7. _____																		
8. _____																		
9. _____																		
<u>75%</u> = Total Cover 50% of total cover: <u>37.5</u> 20% of total cover: <u>15</u>				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
Herb Stratum (Plot size: <u>5</u>)																		
1. <u>Lonicera japonica</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FACU</u>															
2. <u>Frangula alnus</u>	<u>25</u>	<input checked="" type="checkbox"/>	<u>FAC</u>															
3. <u>Ageratina altissima</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACU</u>															
4. _____																		
5. _____																		
6. _____																		
7. _____																		
8. _____																		
9. _____																		
10. _____																		
11. _____																		
<u>70%</u> = Total Cover 50% of total cover: <u>35</u> 20% of total cover: <u>14</u>				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
Woody Vine Stratum (Plot size: <u>15</u>)																		
1. <u>Toxicodendron radicans</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FAC</u>															
2. _____																		
3. _____																		
4. _____																		
5. _____																		
<u>10%</u> = Total Cover 50% of total cover: <u>5</u> 20% of total cover: <u>2</u>																		
Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>																		

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

Carya tomentosa did not have an indicator status listed on the USDA website.

SOIL

Sampling Point: Up F

[illegible]

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Bellamy Property City/County: Clarksville, Montgomery County Sampling Date: 2021-11-08
Applicant/Owner: Provident Realty Advisors State: Tennessee Sampling Point: Up G
Investigator(s): Marian Rubin & Kari Kennel; Spectrum Environmental, Inc. Section, Township, Range: N/A
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0
Subregion (LRR or MLRA): N 122 Lat: 36.609713 Long: -87.237931 Datum: NAD 83
Soil Map Unit Name: Gu - Guthrie silt loam, 0 to 2 percent slopes, occasionally ponded NWI classification: Freshwater Forested/Shrub Wetland habitat is classified as a PFO1

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			

Remarks:

While the NWI map reflects this area as Freshwater Emergent Wetland habitat is classified as a PEM1C, the soil data did not reflect that of wetland soil. Hydrology/hydrophytic vegetation/hydric soils were not observed. According to the Normal Weather Conditions calculation utilized for TDEC HD submittals, the prior period (past three months) has been normal; the area adjacent to where this upland pit was taken has been historically altered for the agricultural purposes, specifically for soybean production.

HYDROLOGY

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

Field Observations:

Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____	

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: Up G

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Quercus palustris</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>57.1</u> (A/B)														
2. <u>Acer rubrum</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FAC</u>															
3. <u>Juglans nigra</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACU</u>															
4. <u>Celtis laevigata</u>	<u>10</u>		<u>FACW</u>															
5. _____	_____	_____	_____	Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>45</u></td> <td>x 2 = <u>90</u></td> </tr> <tr> <td>FAC species <u>35</u></td> <td>x 3 = <u>105</u></td> </tr> <tr> <td>FACU species <u>60</u></td> <td>x 4 = <u>240</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>140</u> (A)</td> <td><u>435</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.11</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>45</u>	x 2 = <u>90</u>	FAC species <u>35</u>	x 3 = <u>105</u>	FACU species <u>60</u>	x 4 = <u>240</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>140</u> (A)	<u>435</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>45</u>	x 2 = <u>90</u>																	
FAC species <u>35</u>	x 3 = <u>105</u>																	
FACU species <u>60</u>	x 4 = <u>240</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>140</u> (A)	<u>435</u> (B)																	
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
50% of total cover: <u>40</u> 20% of total cover: <u>16</u> Sapling/Shrub Stratum (Plot size: <u>15</u>)				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
1. <u>Acer rubrum</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>															
2. <u>Celtis laevigata</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FACW</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>														
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____	Woody Vine Stratum (Plot size: <u>15</u>)														
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
50% of total cover: <u>10</u> 20% of total cover: <u>4</u> Herb Stratum (Plot size: <u>5</u>)				Remarks: (Include photo numbers here or on a separate sheet.)														
1. <u>Parthenocissus quinquefolia</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACU</u>															
2. <u>Lonicera japonica</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FACU</u>															
3. <u>Fraxinus americana</u>	<u>5</u>		<u>FACU</u>															
4. <u>Morus rubra</u>	<u>5</u>		<u>FACU</u>	Woody Vine Stratum (Plot size: <u>15</u>)														
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____	Woody Vine Stratum (Plot size: <u>15</u>)														
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
50% of total cover: <u>20</u> 20% of total cover: <u>8</u> Woody Vine Stratum (Plot size: <u>15</u>)				Woody Vine Stratum (Plot size: <u>15</u>)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____	Woody Vine Stratum (Plot size: <u>15</u>)														
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
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2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
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2. _____	_____	_____	_____															
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2. _____	_____	_____	_____															
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50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
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2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
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3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
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3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
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3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
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2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
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50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
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3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
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2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
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2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
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3. _____	_____	_____	_____															
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2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
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2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
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2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
50% of total cover: _____ 20% of total cover: _____				Woody Vine Stratum (Plot size: <u>15</u>)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															

SOIL

Sampling Point: Up G

[illegible]

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Bellamy Property City/County: Clarksville, Montgomery County Sampling Date: 2021-11-15
 Applicant/Owner: Provident Realty Advisors State: Tennessee Sampling Point: Up H
 Investigator(s): Marian Rubin & Kari Kennel; Spectrum Environmental, Inc. Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR or MLRA): N 122 Lat: 36.608107 Long: -87.243692 Datum: NAD 83
 Soil Map Unit Name: Gu - Guthrie silt loam, 0 to 2 percent slopes, occasionally ponded NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☒, Soil ☒, or Hydrology ☒ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			

Remarks:

According to the Normal Weather Conditions calculation utilized for TDEC HD submittals, the prior period (past three months) has been normal; the area in which this upland pit was taken has been historically altered for the agricultural purposes, specifically for the creation of a pond (Pond 1). The vegetation around Pond 1 is mowed routinely. Additionally, a culvert to west of Up H conveys storm runoff into Pond 1.

HYDROLOGY

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

Field Observations:		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: Up H

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>NaN</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
_____ = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>NaN</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
50% of total cover: _____ 20% of total cover: _____																		
Sapling/Shrub Stratum (Plot size: <u>15</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
_____ = Total Cover																		
50% of total cover: _____ 20% of total cover: _____																		
Herb Stratum (Plot size: <u>5</u>)																		
1. <u>Glycine max</u>	<u>85</u>	<u>✓</u>	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
<u>85%</u> = Total Cover																		
50% of total cover: <u>42.5</u> 20% of total cover: <u>17</u>																		
Woody Vine Stratum (Plot size: <u>15</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
_____ = Total Cover																		
50% of total cover: _____ 20% of total cover: _____																		
Hydrophytic Vegetation Present? Yes _____ No <u>✓</u>																		

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

Note - soybean crop listed was recently harvested and the reported coverage percentages reflect coverage post harvest. Glycine max did not have an indicator status listed on the USDA website.

SOIL

Sampling Point: Up H

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 5	10YR 4/3	100					Silt Loam	
5 - 11	10YR 4/3	98	7.5YR 4/6	2	C	M	Silt Loam	
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

- ☐ Dark Surface (S7)
☐ Polyvalue Below Surface (S8) (**MLRA 147, 148**)
☐ Thin Dark Surface (S9) (**MLRA 147, 148**)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Iron-Manganese Masses (F12) (**LRR N, MLRA 136**)
☐ Umbric Surface (F13) (**MLRA 136, 122**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 148**)
☐ Red Parent Material (F21) (**MLRA 127, 147**)

Indicators for Problematic Hydric Soils³:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Bellamy Property City/County: Clarksville, Montgomery County Sampling Date: 2021-11-08
 Applicant/Owner: Provident Realty Advisors State: Tennessee Sampling Point: Up I
 Investigator(s): Marian Rubin & Kari Kennel; Spectrum Environmental, Inc. Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Linear Slope (%): 2
 Subregion (LRR or MLRA): N 122 Lat: 36.607243 Long: -87.242204 Datum: NAD 83
 Soil Map Unit Name: DsB - Dickson silt loam, 2 to 5 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☒, Soil ☒, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	

Remarks:

According to the Normal Weather Conditions calculation utilized for TDEC HD submittals, the prior period (past three months) has been normal; the area in which this upland pit was taken has been historically altered for the agricultural purposes, specifically for the creation of a pond (Pond 2) sometime around 1949. The vegetation around Pond 2 is mowed routinely and utilized for soybean production

HYDROLOGY

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

Field Observations:

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

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: Up I

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																
1. <u>Salix nigra</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>OBL</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)																
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>5</u> (B)																
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60</u> (A/B)																
4. _____	_____	_____	_____	Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>10</u></td> <td>x 1 = <u>10</u></td> </tr> <tr> <td>FACW species <u>5</u></td> <td>x 2 = <u>10</u></td> </tr> <tr> <td>FAC species <u>15</u></td> <td>x 3 = <u>45</u></td> </tr> <tr> <td>FACU species <u>70</u></td> <td>x 4 = <u>280</u></td> </tr> <tr> <td>UPL species <u>15</u></td> <td>x 5 = <u>75</u></td> </tr> <tr> <td>Column Totals: <u>115</u> (A)</td> <td><u>420</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.65</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>10</u>	x 1 = <u>10</u>	FACW species <u>5</u>	x 2 = <u>10</u>	FAC species <u>15</u>	x 3 = <u>45</u>	FACU species <u>70</u>	x 4 = <u>280</u>	UPL species <u>15</u>	x 5 = <u>75</u>	Column Totals: <u>115</u> (A)	<u>420</u> (B)	Prevalence Index = B/A = <u>3.65</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>10</u>	x 1 = <u>10</u>																			
FACW species <u>5</u>	x 2 = <u>10</u>																			
FAC species <u>15</u>	x 3 = <u>45</u>																			
FACU species <u>70</u>	x 4 = <u>280</u>																			
UPL species <u>15</u>	x 5 = <u>75</u>																			
Column Totals: <u>115</u> (A)	<u>420</u> (B)																			
Prevalence Index = B/A = <u>3.65</u>																				
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)																
50% of total cover: <u>2.5</u> 20% of total cover: <u>1</u> 5% = Total Cover																				
Sapling/Shrub Stratum (Plot size: <u>15</u>)																				
1. <u>Artemisia vulgaris</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>UPL</u>																	
2. <u>Solidago gigantea</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FACW</u>																	
3. <u>Hibiscus moscheutos</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>OBL</u>																	
4. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.																
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>																
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
50% of total cover: <u>12.5</u> 20% of total cover: <u>5</u> 25% = Total Cover																				
Herb Stratum (Plot size: <u>5</u>)																				
1. <u>Dactylis glomerata</u>	<u>70</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>																
2. <u>Glycine max</u>	<u>20</u>	<input checked="" type="checkbox"/>	_____																	
3. <u>Rumex crispus</u>	<u>10</u>	_____	<u>FAC</u>																	
4. <u>Ranunculus sardous</u>	<u>5</u>	_____	<u>FAC</u>																	
5. <u>Lamium purpureum</u>	<u>5</u>	_____	_____																	
6. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>																
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>																
50% of total cover: <u>55</u> 20% of total cover: <u>22</u> 110% = Total Cover																				
Woody Vine Stratum (Plot size: <u>15</u>)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>																
5. _____	_____	_____	_____																	
50% of total cover: _____ 20% of total cover: _____ _____ = Total Cover																				

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

Note - soybean crop listed was recently harvested and the reported coverage percentages reflect coverage post harvest. Glycine max and Lamium purpureum did not have an indicator status listed on the USDA website.

SOIL

Sampling Point: Up I

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 4	10YR 4/3	95	7.5YR 4/6	5	C	M	Silt Loam	
4 - 12	10YR 5/2	90	7.5YR 4/6	10	C	M	Silt Loam	
-								
-								
-								
-								
-								
-								
-								
-								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) (**MLRA 147, 148**)
- ☐ Thin Dark Surface (S9) (**MLRA 147, 148**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) (**LRR N, MLRA 136**)
- ☐ Umbric Surface (F13) (**MLRA 136, 122**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 148**)
- ☐ Red Parent Material (F21) (**MLRA 127, 147**)

Indicators for Problematic Hydric Soils³:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Bellamy Property City/County: Clarksville, Montgomery County Sampling Date: 2021-11-15
Applicant/Owner: Provident Realty Advisors State: Tennessee Sampling Point: Wet A
Investigator(s): Marian Rubin & Kari Kennel; Spectrum Environmental, Inc. Section, Township, Range: N/A
Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Linear Slope (%): 2
Subregion (LRR or MLRA): N 122 Lat: 36.608377 Long: -87.244523 Datum: NAD 83
Soil Map Unit Name: DsB - Dickson silt loam, 2 to 5 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☒, Soil ☒, or Hydrology ☒ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			

Remarks:

According to the Normal Weather Conditions calculation utilized for TDEC HD submittals, the prior period (past three months) has been normal; the area in which this wetland pit was taken has been historically altered for the agricultural purposes, specifically for the creation of a pond (Pond 1). This area was potentially the head of a stream that flows west off property prior to the creation of the pond around 1950. Pond 1 discharges into the area in which this wetland pit was dug. Wetland A transitions into an Intermittent stream at the western property boundary.

HYDROLOGY

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

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 3
Water Table Present? Yes ☒ No ☐ Depth (inches): 11
Saturation Present? Yes ☒ No ☐ Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: Wet A

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																																											
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																																											
2. _____	_____	_____	_____																																												
3. _____	_____	_____	_____																																												
4. _____	_____	_____	_____																																												
5. _____	_____	_____	_____																																												
6. _____	_____	_____	_____																																												
7. _____	_____	_____	_____																																												
<u>0%</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>30</u></td> <td>x 1 = <u>30</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>25</u></td> <td>x 3 = <u>75</u></td> </tr> <tr> <td>FACU species <u>15</u></td> <td>x 4 = <u>60</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>70</u> (A)</td> <td><u>165</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.36</u>	Total % Cover of:	Multiply by:	OBL species <u>30</u>	x 1 = <u>30</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>25</u>	x 3 = <u>75</u>	FACU species <u>15</u>	x 4 = <u>60</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>70</u> (A)	<u>165</u> (B)																													
Total % Cover of:	Multiply by:																																														
OBL species <u>30</u>	x 1 = <u>30</u>																																														
FACW species <u>0</u>	x 2 = <u>0</u>																																														
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UPL species <u>0</u>	x 5 = <u>0</u>																																														
Column Totals: <u>70</u> (A)	<u>165</u> (B)																																														
Sapling/Shrub Stratum (Plot size: <u>15</u>) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ <u>_____</u> = Total Cover 50% of total cover: _____ 20% of total cover: _____																																															
Herb Stratum (Plot size: <u>5</u>) <table style="width: 100%;"> <tr> <td>1. <u>Persicaria hydropiperoides</u></td> <td style="text-align: center;"><u>30</u></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><u>OBL</u></td> </tr> <tr> <td>2. <u>Chloris verticillata</u></td> <td style="text-align: center;"><u>20</u></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><u>_____</u></td> </tr> <tr> <td>3. <u>Setaria parviflora</u></td> <td style="text-align: center;"><u>15</u></td> <td style="text-align: center;"><u>_____</u></td> <td style="text-align: center;"><u>FAC</u></td> </tr> <tr> <td>4. <u>Carex blanda</u></td> <td style="text-align: center;"><u>10</u></td> <td style="text-align: center;"><u>_____</u></td> <td style="text-align: center;"><u>FAC</u></td> </tr> <tr> <td>5. <u>Rubus argutus</u></td> <td style="text-align: center;"><u>10</u></td> <td style="text-align: center;"><u>_____</u></td> <td style="text-align: center;"><u>FACU</u></td> </tr> <tr> <td>6. <u>Glycine max</u></td> <td style="text-align: center;"><u>5</u></td> <td style="text-align: center;"><u>_____</u></td> <td style="text-align: center;"><u>_____</u></td> </tr> <tr> <td>7. <u>Sorghum halepense</u></td> <td style="text-align: center;"><u>5</u></td> <td style="text-align: center;"><u>_____</u></td> <td style="text-align: center;"><u>FACU</u></td> </tr> <tr><td>8. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>9. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>10. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>11. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> </table> <u>95%</u> = Total Cover 50% of total cover: <u>47.5</u> 20% of total cover: <u>19</u>					1. <u>Persicaria hydropiperoides</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>OBL</u>	2. <u>Chloris verticillata</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>_____</u>	3. <u>Setaria parviflora</u>	<u>15</u>	<u>_____</u>	<u>FAC</u>	4. <u>Carex blanda</u>	<u>10</u>	<u>_____</u>	<u>FAC</u>	5. <u>Rubus argutus</u>	<u>10</u>	<u>_____</u>	<u>FACU</u>	6. <u>Glycine max</u>	<u>5</u>	<u>_____</u>	<u>_____</u>	7. <u>Sorghum halepense</u>	<u>5</u>	<u>_____</u>	<u>FACU</u>	8. _____	_____	_____	_____	9. _____	_____	_____	_____	10. _____	_____	_____	_____	11. _____	_____	_____
1. <u>Persicaria hydropiperoides</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>OBL</u>																																												
2. <u>Chloris verticillata</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>_____</u>																																												
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9. _____	_____	_____	_____																																												
10. _____	_____	_____	_____																																												
11. _____	_____	_____	_____																																												
Woody Vine Stratum (Plot size: <u>15</u>) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ <u>_____</u> = Total Cover 50% of total cover: _____ 20% of total cover: _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____																																											

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

Note - soybean crop listed was recently harvested and the reported coverage percentages reflect coverage post harvest. Glycine max did not have an indicator status listed on the USDA website.

SOIL

Sampling Point: Wet A

[illegible]

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Bellamy Property City/County: Clarksville, Montgomery County Sampling Date: 2021-11-08
 Applicant/Owner: Provident Realty Advisors State: Tennessee Sampling Point: Wet B
 Investigator(s): Marian Rubin & Kari Kennel; Spectrum Environmental, Inc. Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR or MLRA): N 122 Lat: 36.604751 Long: -87.242922 Datum: NAD 83
 Soil Map Unit Name: GuGuthrie silt loam, 0 to 2 percent slopes, occasionally ponded NWI classification: Freshwater Emergent Wetland habitat is classified as a PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☒, Soil ☒, or Hydrology ☒ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

Remarks:

According to the Normal Weather Conditions calculation utilized for TDEC HD submittals, the prior period (past three months) has been normal; the area in which this wetland pit was taken has been historically altered for the agricultural purposes, specifically for the creation of a pond (Pond 3/Wetland B). The vegetation around Pond 3 is mowed routinely and utilized for soybean production.

HYDROLOGY

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

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 4
 Water Table Present? Yes ☒ No ☐ Depth (inches): 10
 Saturation Present? Yes ☒ No ☐ Depth (inches): 0
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: Wet B

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
_____ = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>20</u></td> <td>x 1 = <u>20</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>75</u></td> <td>x 3 = <u>225</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>95</u> (A)</td> <td><u>245</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.58</u>	Total % Cover of:	Multiply by:	OBL species <u>20</u>	x 1 = <u>20</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>75</u>	x 3 = <u>225</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>95</u> (A)	<u>245</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>20</u>	x 1 = <u>20</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>75</u>	x 3 = <u>225</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>95</u> (A)	<u>245</u> (B)																	
50% of total cover: _____ 20% of total cover: _____																		
Sapling/Shrub Stratum (Plot size: <u>15</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
_____ = Total Cover				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain)														
50% of total cover: _____ 20% of total cover: _____																		
Herb Stratum (Plot size: <u>5</u>)																		
1. <u>Persicaria virginiana</u>	<u>75</u>	<input checked="" type="checkbox"/>	<u>FAC</u>															
2. <u>Carex bullata</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>OBL</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
_____ = Total Cover				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
50% of total cover: <u>47.5</u> 20% of total cover: <u>19</u>																		
Woody Vine Stratum (Plot size: <u>15</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
_____ = Total Cover																		
50% of total cover: _____ 20% of total cover: _____																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

SOIL

Sampling Point: Wet B

[illegible]

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Bellamy Property City/County: Clarksville, Montgomery County Sampling Date: 2022-03-15
Applicant/Owner: Provident Realty Advisors State: Tennessee Sampling Point: Wet C
Investigator(s): Marian Rubin & Kari Kennel; Spectrum Environmental, Inc. Section, Township, Range: N/A
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0
Subregion (LRR or MLRA): N 122 Lat: 36.610995 Long: -87.238665 Datum: NAD 83
Soil Map Unit Name: GuGuthrie silt loam, 0 to 2 percent slopes, occasionally ponded NWI classification: Freshwater Pond habitat is classified as a PUBHx

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation ☒, Soil ☒, or Hydrology ☒ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			

Remarks:

According to the Normal Weather Conditions calculation utilized for TDEC HD submittals, the prior period (past three months) has been normal; the area in which this wetland pit was taken has been historically altered for the agricultural purposes, specifically for the creation of a pond between 1955 and 1981. The pond appears to have transitioned into Wetland C. The vegetation around and upgradient of Wetland C is mowed routinely and utilized for soybean production

HYDROLOGY

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

Field Observations:

Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>5</u>	

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: Wet C

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Quercus palustris</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)														
2. <u>Acer rubrum</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FAC</u>															
3. <u>Ulmus alata</u>	<u>15</u>		<u>FACU</u>															
4. <u>Salix nigra</u>	<u>5</u>		<u>OBL</u>															
5. _____	_____	_____	_____	Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>10</u></td> <td>x 1 = <u>10</u></td> </tr> <tr> <td>FACW species <u>40</u></td> <td>x 2 = <u>80</u></td> </tr> <tr> <td>FAC species <u>20</u></td> <td>x 3 = <u>60</u></td> </tr> <tr> <td>FACU species <u>25</u></td> <td>x 4 = <u>100</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>95</u> (A)</td> <td><u>250</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.63</u>	Total % Cover of:	Multiply by:	OBL species <u>10</u>	x 1 = <u>10</u>	FACW species <u>40</u>	x 2 = <u>80</u>	FAC species <u>20</u>	x 3 = <u>60</u>	FACU species <u>25</u>	x 4 = <u>100</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>95</u> (A)	<u>250</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>10</u>	x 1 = <u>10</u>																	
FACW species <u>40</u>	x 2 = <u>80</u>																	
FAC species <u>20</u>	x 3 = <u>60</u>																	
FACU species <u>25</u>	x 4 = <u>100</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>95</u> (A)	<u>250</u> (B)																	
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)														
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
Sapling/Shrub Stratum (Plot size: <u>15</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____														
Herb Stratum (Plot size: <u>5</u>)																		
1. <u>Persicaria posumbu</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FACU</u>															
2. <u>Ludwigia palustris</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>OBL</u>															
3. _____	_____	_____	_____	Remarks: (Include photo numbers here or on a separate sheet.)														
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____																		
Woody Vine Stratum (Plot size: <u>15</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____																		
Woody Vine Stratum (Plot size: <u>15</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____																		
Woody Vine Stratum (Plot size: <u>15</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															

SOIL

Sampling Point: Wet C

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
1 - 6	10YR 4/2	95	7.5YR 4/6	5	C	M	Silt Loam	
6 - 12	10YR 4/2	75	7.5YR 4/6	25	C	M	Silt Loam	
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

- ☐ Dark Surface (S7)
☐ Polyvalue Below Surface (S8) (**MLRA 147, 148**)
☐ Thin Dark Surface (S9) (**MLRA 147, 148**)
☐ Loamy Gleyed Matrix (F2)
☒ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Iron-Manganese Masses (F12) (**LRR N, MLRA 136**)
☐ Umbric Surface (F13) (**MLRA 136, 122**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 148**)
☐ Red Parent Material (F21) (**MLRA 127, 147**)

Indicators for Problematic Hydric Soils³:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Bellamy Property City/County: Clarksville, Montgomery County Sampling Date: 2021-11-15
 Applicant/Owner: Provident Realty Advisors State: Tennessee Sampling Point: Wet D1
 Investigator(s): Marian Rubin & Kari Kennel; Spectrum Environmental, Inc. Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR or MLRA): N 122 Lat: 36.607979 Long: -87.237413 Datum: NAD 83
 Soil Map Unit Name: Gu - Guthrie silt loam, 0 to 2 percent slopes, occasionally ponded NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☒, or Hydrology ☒ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			

Remarks:

According to the Normal Weather Conditions calculation utilized for TDEC HD submittals, the prior period (past three months) has been normal; the area of this wetland pit has been historically altered for the agricultural purposes, specifically for the creation of a pond 4, which hydrologically contributes to Wet D, between 1955 and 1981. Additionally, the area southeast of this wetland point was disturbed for the installation of TVA lines between 1955 and 1981.

HYDROLOGY

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):
 Water Table Present? Yes ☐ No ☒ Depth (inches):
 Saturation Present? Yes ☒ No ☐ Depth (inches): 5
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: Wet D1

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. <u>Acer rubrum</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. <u>Ulmus americana</u>	<u>5</u>		<u>FACW</u>															
3. <u>Quercus palustris</u>	<u>5</u>		<u>FACW</u>															
4. _____																		
5. _____				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>10</u></td> <td>x 2 = <u>20</u></td> </tr> <tr> <td>FAC species <u>60</u></td> <td>x 3 = <u>180</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>70</u> (A)</td> <td><u>200</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.86</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>10</u>	x 2 = <u>20</u>	FAC species <u>60</u>	x 3 = <u>180</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>70</u> (A)	<u>200</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>10</u>	x 2 = <u>20</u>																	
FAC species <u>60</u>	x 3 = <u>180</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>70</u> (A)	<u>200</u> (B)																	
6. _____																		
7. _____																		
8. _____																		
9. _____				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain)														
10. _____																		
11. _____																		
12. _____																		
50% of total cover: <u>20</u> 20% of total cover: <u>8</u> 40% = Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
Sapling/Shrub Stratum (Plot size: <u>15</u>)																		
1. <u>Acer rubrum</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>															
2. _____																		
3. _____				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
4. _____																		
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7. _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____														
8. _____																		
9. _____																		
10. _____																		
50% of total cover: <u>7.5</u> 20% of total cover: <u>3</u> 15% = Total Cover				Woody Vine Stratum (Plot size: <u>15</u>)														
Herb Stratum (Plot size: <u>5</u>)																		
1. <u>Smilax rotundifolia</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>															
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3. _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____														
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50% of total cover: <u>0</u> 20% of total cover: <u>0</u> 0% = Total Cover				Woody Vine Stratum (Plot size: <u>15</u>)														
Herb Stratum (Plot size: <u>5</u>)</																		

SOIL

Sampling Point: Wet D1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
1 - 4	10YR 5/2	90	7.5YR 4/6	10	C	M	Silt Loam	
4 - 12	10YR 5/2	85	7.5YR 4/6	15	C	M	Silt Loam	
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

- ☐ Dark Surface (S7)
☐ Polyvalue Below Surface (S8) (**MLRA 147, 148**)
☐ Thin Dark Surface (S9) (**MLRA 147, 148**)
☐ Loamy Gleyed Matrix (F2)
☒ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Iron-Manganese Masses (F12) (**LRR N, MLRA 136**)
☐ Umbric Surface (F13) (**MLRA 136, 122**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 148**)
☐ Red Parent Material (F21) (**MLRA 127, 147**)

Indicators for Problematic Hydric Soils³:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Bellamy Property City/County: Clarksville, Montgomery County Sampling Date: 2021-11-15
 Applicant/Owner: Provident Realty Advisors State: Tennessee Sampling Point: Wet D2
 Investigator(s): Marian Rubin & Kari Kennel; Spectrum Environmental, Inc. Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR or MLRA): N 122 Lat: 36.608801 Long: -87.235286 Datum: NAD 83
 Soil Map Unit Name: Gu - Guthrie silt loam, 0 to 2 percent slopes, occasionally ponded NWI classification: Freshwater Forested/Shrub Wetland habitat is classified as a PFOIA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☒, or Hydrology ☒ significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			

Remarks:

According to the Normal Weather Conditions calculation utilized for TDEC HD submittals, the prior period (past three months) has been normal; the area of this wetland pit has been historically altered for the agricultural purposes, specifically for the creation of a pond 4, which hydrologically contributes to Wet D, between 1955 and 1981. Additionally, the area southeast of this wetland point was disturbed for the installation of TVA lines between 1955 and 1981.

HYDROLOGY

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

Field Observations:		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>4</u>	

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: Wet D2

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. <u>Quercus palustris</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)														
2. <u>Ostrya virginiana</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACU</u>															
3. <u>Celtis laevigata</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACW</u>															
4. <u>Acer rubrum</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>															
5. <u>Carya ovata</u>	<u>10</u>		<u>FACU</u>															
6. _____				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>5</u></td> <td>x 1 = <u>5</u></td> </tr> <tr> <td>FACW species <u>57</u></td> <td>x 2 = <u>114</u></td> </tr> <tr> <td>FAC species <u>39</u></td> <td>x 3 = <u>117</u></td> </tr> <tr> <td>FACU species <u>50</u></td> <td>x 4 = <u>200</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>151</u> (A)</td> <td><u>436</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.89</u>	Total % Cover of:	Multiply by:	OBL species <u>5</u>	x 1 = <u>5</u>	FACW species <u>57</u>	x 2 = <u>114</u>	FAC species <u>39</u>	x 3 = <u>117</u>	FACU species <u>50</u>	x 4 = <u>200</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>151</u> (A)	<u>436</u> (B)
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FACU species <u>50</u>	x 4 = <u>200</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>151</u> (A)	<u>436</u> (B)																	
7. _____																		
<u>80%</u> = Total Cover 50% of total cover: <u>40</u> 20% of total cover: <u>16</u>																		
Sapling/Shrub Stratum (Plot size: <u>15</u>)																		
1. <u>Ostrya virginiana</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)														
2. <u>Ulmus americana</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACW</u>															
3. <u>Asimina triloba</u>	<u>2</u>		<u>FAC</u>															
4. _____																		
5. _____																		
6. _____				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
7. _____																		
8. _____																		
9. _____																		
10. _____																		
<u>42%</u> = Total Cover 50% of total cover: <u>21</u> 20% of total cover: <u>8.4</u>				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.														
Herb Stratum (Plot size: <u>5</u>)																		
1. <u>Microstegium vimineum</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FAC</u>															
2. <u>Smilax rotundifolia</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FAC</u>															
3. <u>Carex pedunculata</u>	<u>5</u>		<u>OBL</u>															
4. <u>Celtis laevigata</u>	<u>2</u>		<u>FACW</u>	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____														
5. <u>Acer rubrum</u>	<u>2</u>		<u>FAC</u>															
6. _____																		
7. _____																		
8. _____																		
9. _____				_____ = Total Cover 50% of total cover: <u>14.5</u> 20% of total cover: <u>5.8</u>														
10. _____																		
11. _____																		
Woody Vine Stratum (Plot size: <u>15</u>)																		
1. _____																		
2. _____																		
3. _____																		
4. _____																		
5. _____																		

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

SOIL

Sampling Point: Wet D2

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
1 - 3	10YR 3/2	95	7.5YR 4/6	5	C	M	Silt Loam	
3 - 8	10YR 5/1	90	7.5YR 4/6	10	C	M	Silt Loam	
-								
-								
-								
-								
-								
-								
-								
-								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) (**MLRA 147, 148**)
- ☐ Thin Dark Surface (S9) (**MLRA 147, 148**)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) (**LRR N, MLRA 136**)
- ☐ Umbric Surface (F13) (**MLRA 136, 122**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 148**)
- ☐ Red Parent Material (F21) (**MLRA 127, 147**)

Indicators for Problematic Hydric Soils³:

- ☐ 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)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Bellamy Property City/County: Clarksville, Montgomery County Sampling Date: 2021-11-15
 Applicant/Owner: Provident Realty Advisors State: Tennessee Sampling Point: Wet D3
 Investigator(s): Marian Rubin & Kari Kennel; Spectrum Environmental, Inc. Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR or MLRA): N 122 Lat: 36.607668 Long: -87.236618 Datum: NAD 83
 Soil Map Unit Name: Gu - Guthrie silt loam, 0 to 2 percent slopes, occasionally ponded NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☒, or Hydrology ☒ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		

Remarks:

According to the Normal Weather Conditions calculation utilized for TDEC HD submittals, the prior period (past three months) has been normal; the area of this wetland pit has been historically altered for the installation of TVA lines between 1955 and 1981. Water s discharged into Wetland D from a culvert beneath the railroad tracks located approximately at 36.607186, -87.237211.

HYDROLOGY

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

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 1.5
 Water Table Present? Yes ☒ No ☐ Depth (inches): 5
 Saturation Present? Yes ☒ No ☐ Depth (inches): 0
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

 Sampling Point: Wet D3

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
_____ = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>35</u></td> <td>x 1 = <u>35</u></td> </tr> <tr> <td>FACW species <u>25</u></td> <td>x 2 = <u>50</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 = <u>30</u></td> </tr> <tr> <td>FACU species <u>2</u></td> <td>x 4 = <u>8</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>72</u> (A)</td> <td><u>123</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>1.71</u>	Total % Cover of:	Multiply by:	OBL species <u>35</u>	x 1 = <u>35</u>	FACW species <u>25</u>	x 2 = <u>50</u>	FAC species <u>10</u>	x 3 = <u>30</u>	FACU species <u>2</u>	x 4 = <u>8</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>72</u> (A)	<u>123</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>35</u>	x 1 = <u>35</u>																	
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UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>72</u> (A)	<u>123</u> (B)																	
50% of total cover: _____ 20% of total cover: _____																		
Sapling/Shrub Stratum (Plot size: <u>15</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
_____ = Total Cover																		
50% of total cover: _____ 20% of total cover: _____																		
Herb Stratum (Plot size: <u>5</u>)																		
1. <u>Juncus pylaei</u>	<u>25</u>	<input checked="" type="checkbox"/>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Dichanthelium scoparium</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FACW</u>															
3. <u>Microstegium vimineum</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FAC</u>															
4. <u>Solidago gigantea</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FACW</u>															
5. <u>Rhexia mariana</u>	<u>5</u>		<u>OBL</u>															
6. <u>Cyperus strigosus</u>	<u>5</u>		<u>FACW</u>															
7. <u>Carex lacustris</u>	<u>5</u>		<u>OBL</u>															
8. <u>Symphyotrichum ericoides</u>	<u>2</u>		<u>FACU</u>															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
<u>72%</u> = Total Cover																		
50% of total cover: <u>36</u> 20% of total cover: <u>14.4</u>																		
Woody Vine Stratum (Plot size: <u>15</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
_____ = Total Cover																		
50% of total cover: _____ 20% of total cover: _____																		
Remarks: (Include photo numbers here or on a separate sheet.)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____														

SOIL

Sampling Point: Wet D3

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
1 - 5	10YR 4/1	95	7.5YR 4/6	5	C	M	Silt Loam	
5 - 12	10YR 5/1	90	7.5YR 4/6	10	C	M	Silt Loam	
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
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☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1) (**LRR N, MLRA 147, 148**)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)

- ☐ Dark Surface (S7)
☐ Polyvalue Below Surface (S8) (**MLRA 147, 148**)
☐ Thin Dark Surface (S9) (**MLRA 147, 148**)
☐ Loamy Gleyed Matrix (F2)
☒ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Iron-Manganese Masses (F12) (**LRR N, MLRA 136**)
☐ Umbric Surface (F13) (**MLRA 136, 122**)
☐ Piedmont Floodplain Soils (F19) (**MLRA 148**)
☐ Red Parent Material (F21) (**MLRA 127, 147**)

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No _____

Remarks: