

### Sent Via Email

March 1, 2023

Trammel Crow Company 555 Fayetteville Street, Suite 300 Raleigh, North Carolina 27601

Attn: Ms. Brooke Bures

Re: Preliminary Stream and Wetlands Survey

Undeveloped Land Mulberry Road

Harrisburg, North Carolina <u>H&H Job No.TCD-007</u>

Dear Brooke:

#### 1.0 Introduction

Hart & Hickman, PC (H&H) is pleased to present this preliminary stream and wetlands survey for the residential and undeveloped land located at 1967-2173 Mulberry Road and 6205 Pharr Mill Road in Harrisburg, Cabarrus County, North Carolina (Site or subject Site). The Site consists of four tax parcels (Cabarrus County Parcel ID Numbers 55177993000000, 55179854430000, 55270917400000, and 55179699450000) that total approximately 234 acres of land. The Site currently exists primarily as undeveloped wooded land with residences in the western and northern portions of the Site and apparent vacant structures in the north-central portion of the site. Cleared field areas exist in the southern portion of the Site. A Site location map is provided as Figure 1, and an aerial map that depicts potential Waters of the US is provided as Figure 2.

H&H personnel visited the Site and conducted the preliminary stream and wetlands survey activities on October 11 and 12, 2022. The purpose of the preliminary survey activities was to identify Waters of the US (potential jurisdictional streams, wetlands, and open waters) at the Site prior to potential future development activities. A summary of the preliminary stream and wetlands survey activities and results is provided in the following sections.

### 2.0 Preliminary Stream and Wetland Survey Activities

H&H conducted a preliminary stream and wetlands survey at the subject Site, which consisted of 1) a desktop review of maps and environmental documents; and 2) a Site-specific survey for streams, wetlands, and surface water features. A summary of the survey activities is provided below.

## 2.1 Map and Environmental Document Review

In order to evaluate the potential presence of streams and wetlands on the subject Site, H&H performed the following:

- reviewed the Concord SE and Harrisburg, North Carolina (2019) US Geological Survey (USGS) 7.5-minute topographic maps with coverage of the subject Site;
- reviewed the Cabarrus County Geographical Information System (GIS) website for the
  presence of water bodies and floodplains on the subject Site
  (https://location.cabarruscounty.us/mapcabarrus/);
- reviewed the US Fish and Wildlife Service (FWS) National Wetlands Inventory (NWI) map for the presence of potential jurisdictional wetlands and surface water features on the subject Site (https://www.fws.gov/wetlands/data/mapper.html);
- reviewed the United States Department of Agriculture (USDA) Natural Resources
   Conservation Service (NRCS) Web Soil Survey website for potential hydric soil series
   present on the subject Site (https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm);
- reviewed the USDA Soil Conservation Service (SCS) Published Soil Survey of Cabarrus County (1988) for soil series and the presence of water bodies on the subject Site; and
- reviewed the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) for the presence of floodplains on the subject Site (https://msc.fema.gov/portal/search).



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A copy of the USGS topographic maps is included as Figure 1, and copies of the GIS

information, NWI map, soil survey maps, and flood map are included in Appendix A.

Information obtained from our review of these documents is summarized below.

USGS 7.5-Minute Topographic Maps

H&H reviewed the USGS 7.5-minute topographic maps with coverage of the subject Site. The

USGS maps depict Rocky River as generally forming the Site's southwestern and southern

boundaries. The USGS maps also depict an intermittent stream channel draining from a dammed

pond in the central portion of the Site along with an additional intermittent stream channel in the

east-central portion of the Site. Wetland symbology is also depicted in the southern portion of

the Site. The topographic gradient at the Site slopes generally to the south-southwest towards

Rocky River.

**Cabarrus County GIS** 

H&H reviewed the Cabarrus County GIS website to determine if surface water bodies or

floodplains are depicted on the subject Site. The Cabarrus County GIS website depicts Rocky

River as generally forming the Site's southwestern and southern boundaries. The website also

depicts a stream channel draining from a dammed pond in the central portion of the Site along

with an additional stream channel in the east-central portion of the Site. The Cabarrus County

GIS website also depicts the regulatory floodway, and the 100- and 500-year floodplains of

Rocky River in the southwestern and southern portions of the Site.

NWI Map

H&H reviewed the NWI map for potential jurisdictional wetlands and surface waters located on

the Site. The NWI map depicts Rocky River as generally forming the Site's southwestern and

southern boundaries. NWI classifies Rocky River as R2UBH, which is defined as a lower

perennial riverine system with an unconsolidated bottom that is permanently flooded. The NWI

map also depicts a stream feature in the central portion of the Site, and classifies the upgradient

portion as R5UBH and the downgradient portion as R4SBC. R5UBH is defined as an unknown

perennial riverine system with an unconsolidated bottom that is permanently flooded. R4SBC is



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defined as an intermittent riverine system with a streambed bottom that is seasonally flooded.

An additional stream feature is depicted in the east-central portion of the Site and is also

classified by NWI as R4SBC. The NWI map also depicts a wetland feature in the southeastern

portion of the Site. NWI classifies the wetland area as PFO1A, which is defined as a forested

palustrine system that is dominated by broad-leaved deciduous vegetation and is temporarily

flooded.

USDA NRCS Web Soil Survey

H&H reviewed soil survey information and identified one potentially hydric soil series on the

Site: Chewacla loam, 0 to 2 percent slopes, frequently flooded (ChA). The ChA series is

depicted in the southwestern and southern portions of the Site, and the north-central portion of

the Site. Hydric soil series are sometimes associated with consistently saturated soil such as in

wetland areas.

USDA SCS Published Soil Survey

H&H reviewed soil information on the published soil survey and identified multiple soil series

including the potentially hydric soil series ChA on the Site. No other potentially hydric soil

series were identified on the Site. The published soil survey also depicts Rocky River along the

Site's southwestern and southern boundaries, and three unnamed stream channels in the western,

central, and east-central portions of the Site.

FEMA FIRM

The FEMA FIRM panels depict the regulatory floodway and the 100- and 500-year floodplains

of Rocky River in the southwestern and southern portions of the Site.

2.2 Site-Specific Survey

On October 11 and 12, 2022, H&H performed a preliminary stream and wetlands survey on the

Site in accordance with the 1987 US Army Corps of Engineers (Corps) Manual and the Regional

Supplement to the Corps Wetland Delineation Manual – Eastern Mountains and Piedmont

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Region (Version 2.0), and the North Carolina Department of Environmental Quality Division of Water Resources (DEQ DWR) Methodology for Identification of Intermittent and Perennial Streams and Their Origins (Version 4.11). Hydric soil, wetland hydrology, and wetland vegetation must be present to classify an area as a wetland. A defined bed and bank and an ordinary high-water mark (OHWM) must be present to classify a channel as a stream. H&H flagged potential features in the field using an alphanumeric system, and estimated the locations of each flag using a handheld Trimble Global Positioning System (GPS) unit. A summary of the survey activities is provided below.

#### Stream Survey

H&H surveyed the Site for potential streams or surface water features. H&H observed the following potentially jurisdictional stream on the subject Site:

- Stream Channel "A" (SCA) SCA originates in the northwestern portion of the Site where an ephemeral/erosional drainage feature transitions to an intermittent stream at a transitional headcut. At this point, a defined bed and bank and OHWM are present, and SCA appears to seasonally intersect the water table. SCA flows generally to the south before reaching a confluence with Rocky River near the southwestern Site boundary. H&H used DEQ DWR's Stream Identification Form (version 4.11), which indicates that SCA appears to have characteristics consistent with that of an intermittent stream. SCA totals approximately 678 linear feet of on-Site stream length.
- Stream Channel "B" (SCB) SCB originates in the western portion of the Site where an ephemeral/erosional drainage feature transitions to an intermittent stream at a transitional headcut. At this point, a defined bed and bank and OHWM are present, and SCB appears to seasonally intersect the water table. SCB flows generally to the west before reaching a confluence with SCA. H&H used DEQ DWR's Stream Identification Form (version 4.11), which indicates that SCB appears to have characteristics consistent with that of an intermittent stream. SCB totals approximately 36 linear feet of on-Site stream length.



- Stream Channel "C" (SCC) SCC originates in the central portion of the Site downgradient of the northeastern branch of Wetland Area "B" (WAB) when drainage from WAB channelizes and forms a defined bed and bank. At this point, an OHWM is also present and SCC appears to seasonally intersect the water table. SCC flows generally to the south-southwest into WAB where SCC loses bed and bank and OHWM. H&H used DEQ DWR's Stream Identification Form (version 4.11), which indicates that SCC appears to have characteristics consistent with that of an intermittent stream. SCC totals approximately 124 linear feet on-Site stream length.
- Stream Channel "D" (SCD) SCD originates in the central portion of the Site downgradient of a culvert pipe. SCD appears to seasonally intersect the water table. SCD flows generally to the south into WAB where SCD loses bed and bank and OHWM. H&H used DEQ DWR's Stream Identification Form (version 4.11), which indicates that SCD appears to have characteristics consistent with that of an intermittent stream. SCD totals approximately 46 linear feet on-Site stream length.
- Stream Channel "E" (SCE) SCE originates in the north-central portion of the Site where an ephemeral/erosional drainage feature transitions to an intermittent stream at a transitional headcut. At this point, a defined bed and bank and OHWM are present, and SCE appears to seasonally intersect the water table. SCE flows generally to the south into Wetland Area "C" (WAC) where SCE loses bed and bank and OHWM. H&H used DEQ DWR's Stream Identification Form (version 4.11), which indicates that SCE appears to have characteristics consistent with that of an intermittent stream. SCE totals approximately 496 linear feet on-Site stream length.
- Rocky River Rocky River originates off-Site to the west and flows in a southeasterly direction, generally forming the Site's southwestern and southern boundaries. Rocky River totals approximately 5,980 linear feet of on-Site length.



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The stream features are depicted on Figure 2, and representative data forms and photos are provided in Appendix B and Appendix C, respectively.

### Wetland Survey

During our Site visit, H&H checked potential wetland areas for the presence of hydrology indicators, hydrophytic vegetation, and hydric soil indicators. H&H delineated six potentially jurisdictional wetland areas on the Site. H&H advanced test pit borings in the potential wetland areas to document the wetland criteria and noted that soils sampled in the wetland areas exhibited characteristics consistent with those of a hydric soil. H&H also observed the primary and secondary hydrologic indicators and sufficient obligate to facultative wetland vegetation located at the wetland test pit borings within the potential wetland areas. In addition, test pit borings were advanced in upland areas at the Site to document upland conditions. H&H observed the following potentially jurisdictional wetland areas on the subject Site:

- Wetland Area "A" (WAA) WAA is a linear wetland located in a drainage swale in the
  western portion of the Site. WAA drains generally in a southern direction into Rocky
  River and encompasses approximately 0.01 acre of on-Site area. Vegetation consists of
  herbaceous species.
- Wetland Area "B" (WAB) –WAB is a depressional wetland located in the central portion of the Site. WAB receives drainage from SCC and SCD. WAB drains generally in a southerly direction and encompasses approximately 0.59 acre of on-Site area. Vegetation consists of deciduous hardwoods and herbaceous species.
- Wetland Area "C" (WAC) WAC is a fringe wetland located in a depressional area upgradient of Pond "A" in the north-central portion of the Site. WAC receives drainage from SCE and drains generally in a southerly direction into Pond "A". WAC encompasses approximately 1.31 acres of on-Site area. Vegetation consists of deciduous hardwoods and herbaceous species.



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• Wetland Area "D" (WAD) - WAD is a linear wetland located in a drainage swale in the

north-central portion of the Site. WAD drains generally in a southwesterly direction into

SCE. WAD encompasses approximately 0.01 acre of on-Site area. Vegetation consists

of deciduous hardwood saplings and herbaceous species.

• Wetland Area "E" (WAE) – WAE is a linear wetland located in a drainage swale in the

east-central portion of the Site. WAE drains generally in a southerly direction and

encompasses approximately 0.13 acre of on-Site area. Vegetation consists of deciduous

hardwood saplings and herbaceous species.

• Wetland Area "F" (WAF) – WAF is a depressional wetland located in the south-central

and southeastern portions of the Site. WAF drains generally in a southeasterly direction

into Rocky River and encompasses approximately 1.55 acres of on-Site area. Vegetation

consists of deciduous hardwoods and deciduous hardwood saplings.

The wetland areas are depicted on Figure 2, and representative data forms and photos are

provided in Appendix B and Appendix C, respectively.

Open Water Survey

H&H surveyed the Site for potential surface water features other than streams and wetlands, and

observed one pond on-Site during our survey:

• Pond "A" is located in the central portion of the Site. Pond "A" is constructed with a

dam and drains through a spillway in a southwesterly direction toward SCD. Pond "A"

encompasses approximately 0.88 acre of on-Site area.

The pond is depicted on Figure 2 and representative photos are provided in Appendix C.

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SMARTER ENVIRONMENTAL SOLUTIONS

### 3.0 Permitting for Stream and Wetland Impacts

Proposed impacts to streams, wetlands, and/or open water features require Section 404/401 permits from the Corps and DWR, respectively. H&H recommends that the streams, wetlands, and pond be verified by the Corps during a Preliminary Jurisdictional Determination (PJD) Site visit. Only the Corps can determine if jurisdictional features exist. If the Corps concurs with the preliminary findings of this survey, Section 404/401 permits will be required if future development plans include impacts to the on-Site streams, wetlands, and/or pond.

The Corps published Nationwide Permits (NWPs) including NWP #39, which went into effect on March 15, 2021. The NWP #39 allows for cumulative impacts of 0.5 acre to streams, wetlands, and open waters for commercial and institutional developments. In response to NWP #39, the North Carolina DEQ DWR published corresponding Water Quality Certificate (WQC) #4263, which also went into effect on March 15, 2021. According to WQC #4263, an Individual 401 WQC will be required if impacts exceed 150 linear feet of stream or 0.1 acre of wetland. The Individual 401 WQC requires the publication of an electronic Public Notice, which is published by DEQ DWR during their review timeframe. Finally, the Corps Wilmington District has finalized regional conditions associated with the NWPs, which limits the loss of stream bed to 0.05 acre under the NWP program. As noted above, the current NWP #39 allows up to 0.5 acre of cumulative wetland, stream, and open water impact with potential mitigation provided the applicant can: 1) justify avoidance of wetland/stream impacts where practicable, and 2) minimize impacts to wetland/streams where impacts cannot be avoided. If impacts to on-Site streams, wetlands, and open waters cumulatively exceed 0.5 acre or other criteria noted above, an Individual Permit will be required.



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Thank you for the opportunity to assist you with this project. Please contact us should you have questions or require additional information.

Sincerely,

Hart and Hickman, PC

Danielle Clark, PWS

Sr. Project Environmental Scientist

Danielle Clark

Julia McGuire

Asst. Project Environmental Scientist

Attachments Figure 1 – Site Location Map

Figure 2 – Preliminary Wetland Delineation Map

Appendix A – Support Documents: Cabarrus County GIS Map, NWI Map, Soil

Survey Maps, and FEMA Flood Map

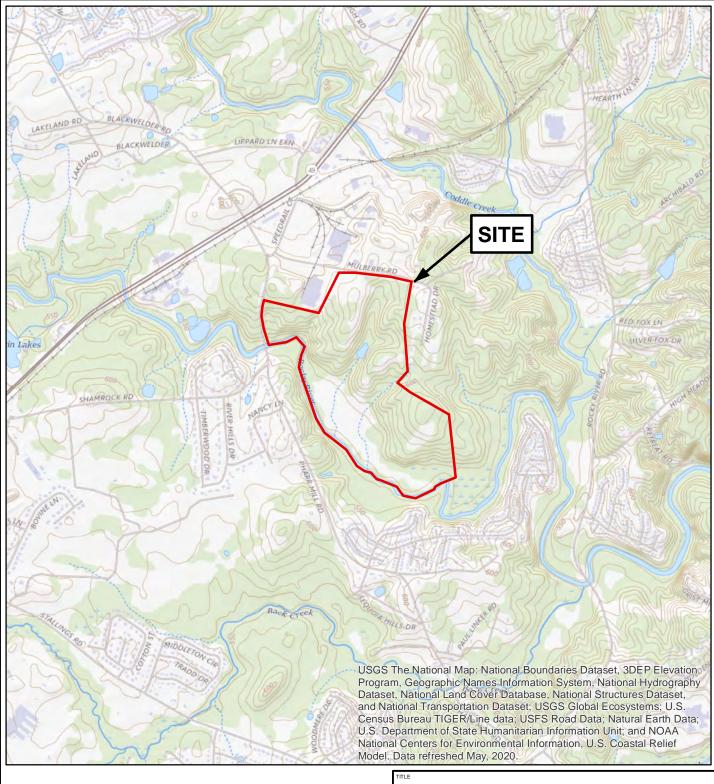
Appendix B – Survey Field Forms: DEQ DWR Stream Identification Forms and

U.S. Army Corps of Engineers Wetland Determination Forms

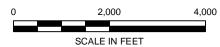
Appendix C – Site Photographs

**Figures** 









U.S.G.S. QUADRANGLE MAP

CONCORD SE AND HARRISBURG, NORTH CAROLINA 2019

QUADRANGLE 7.5 MINUTE SERIES (TOPOGRAPHIC)

### SITE LOCATION MAP

PROJEC

UNDEVELOPED LAND MULBERRY ROAD HARRISBURG, NORTH CAROLINA



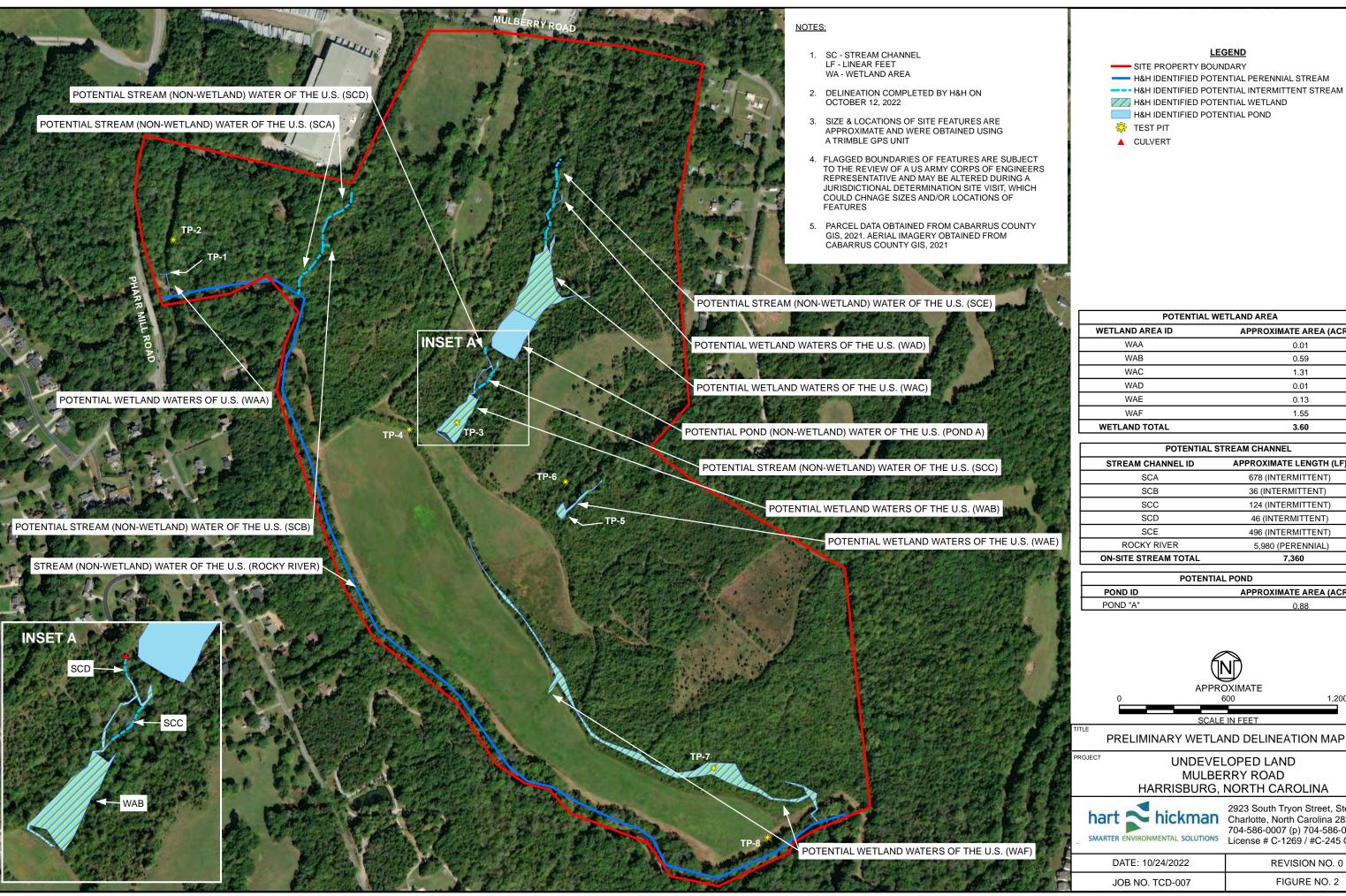
2923 South Tryon Street - Suite 100 Charlotte, North Carolina 28203 704-586-0007 (p) 704-586-0373 (f) License # C-1269 / # C-245 Geology

DATE: 10/19/2022

REVISION NO: 0

C:\Users\jmcguire\Desktop\TCD.007 Desktop Mapping\Figure 1.mxd

JOB NO: TCD-007 FIGURE NO: 1



#### **LEGEND**

SITE PROPERTY BOUNDARY

---- H&H IDENTIFIED POTENTIAL PERENNIAL STREAM

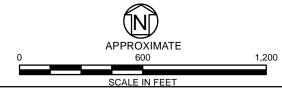
H&H IDENTIFIED POTENTIAL WETLAND

H&H IDENTIFIED POTENTIAL POND

POTENTIAL WETLAND AREA					
WETLAND AREA ID	APPROXIMATE AREA (ACRES)				
WAA	0.01				
WAB	0.59				
WAC	1.31				
WAD	0.01				
WAE	0.13				
WAF	1.55				
WETLAND TOTAL	3.60				

POTENTIAL :	STREAM CHANNEL
STREAM CHANNEL ID	APPROXIMATE LENGTH (LF)
SCA	678 (INTERMITTENT)
SCB	36 (INTERMITTENT)
SCC	124 (INTERMITTENT)
SCD	46 (INTERMITTENT)
SCE	496 (INTERMITTENT)
ROCKY RIVER	5,980 (PERENNIAL)
ON-SITE STREAM TOTAL	7,360

POTENTIAL POND				
POND ID	APPROXIMATE AREA (ACRES)			
POND "A"	0.88			



PRELIMINARY WETLAND DELINEATION MAP

UNDEVELOPED LAND MULBERRY ROAD HARRISBURG, NORTH CAROLINA



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REVISION NO. 0 FIGURE NO. 2 JOB NO. TCD-007

# Appendix A

# **Support Documents**

- Cabarrus County GIS Map (Figure A1)
- NWI Map (Figure A2)
- Soil Survey Maps (Figures A3 & A4)
- FEMA Flood Map (Figure A5)









MAP CABARRUS

**OPEN MAPPING DATA** 

# CABARRUS COUNTY GIS MAP

PROJECT

UNDEVELOPED LAND MULBERRY ROAD HARRISBURG, NORTH CAROLINA



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DATE: 11/16/2022	REVISION NO: 0
JOB NO: TCD-007	FIGURE NO: A1

Path: S:AAA-Master Projects/Trammell Crow Company - TCD/TCD-007 Mulberry Road/Delin/GIS/Background Mapping/Figure-A1 Water Quality Buffers.mxc





U.S. FISH AND WILDLIFE SERVICE (USFWS)

#### **HYDROLOGIC UNIT CODE 03040105**

NATIONAL WETLANDS INVENTORY (NWI)

## NATIONAL WETLANDS INVENTORY MAP

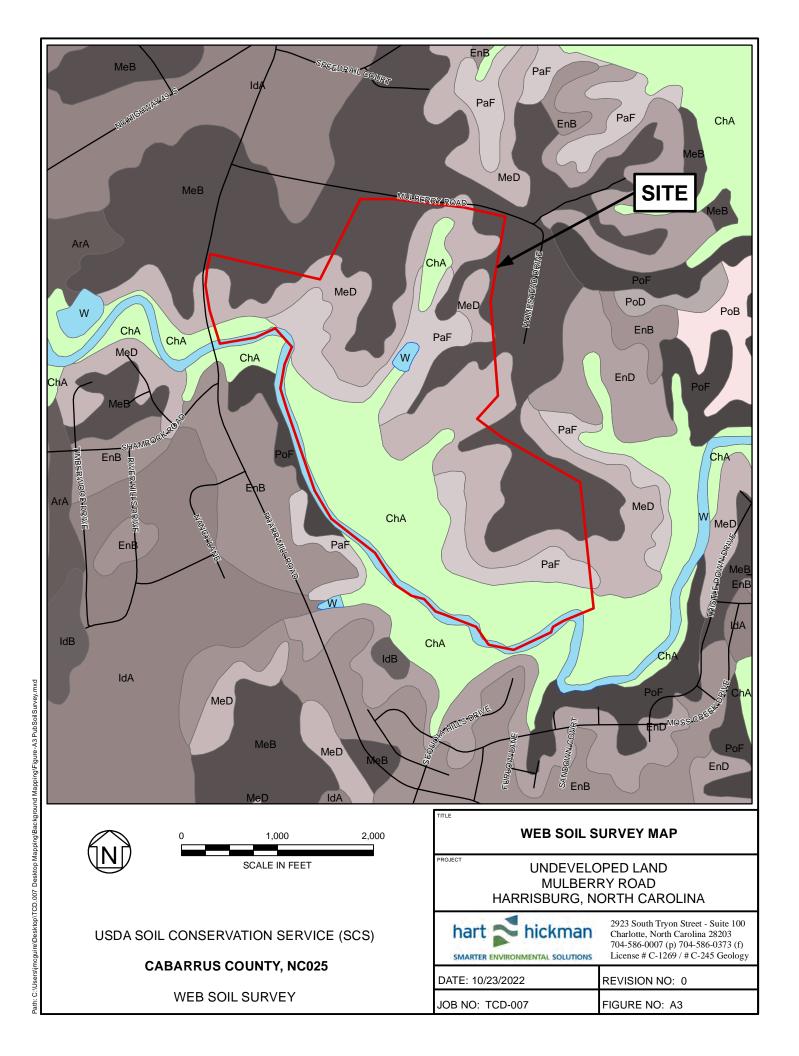
PROJECT

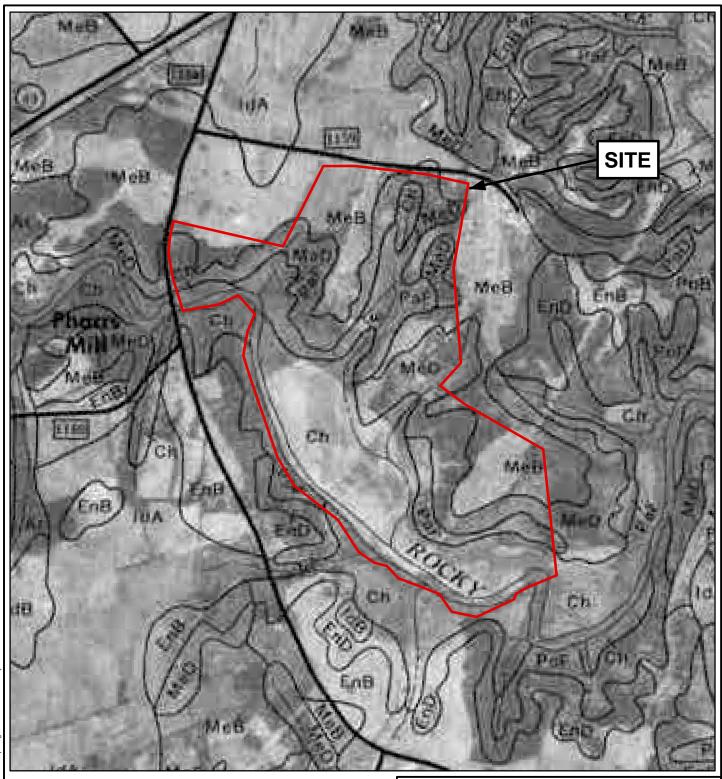
UNDEVELOPED LAND MULBERRY ROAD HARRISBURG, NORTH CAROLINA



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DATE: 10/23/2022	REVISION NO: 0
JOB NO: TCD-007	FIGURE NO: A2









USDA SOIL CONSERVATION SERVICE (SCS)

**CABARRUS COUNTY, SHEET 6, PUBLISHED 1988** 

PUBLISHED SOIL SURVEY

#### BUB

### **PUBLISHED SOIL SURVEY MAP**

PROJECT

UNDEVELOPED LAND MULBERRY ROAD HARRISBURG, NORTH CAROLINA

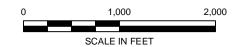


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DATE: 10/21/2022	REVISION NO: 0
JOB NO: TCD-007	FIGURE NO: A4

Path: C:\Users\jmcguire\Desktop\NAR-008 Desktop Mapping\Background Maps\Figure-A4 WebSoilSurvey.mxd





FEDERAL EMERGENCY MANAGMENT AGENCY (FEMA)

PANELS 3710551800K, 3710552800K, 3710551700K, 3710552700K REVISED 11/16/2018

FLOOD INSURANCE RATE MAP (FIRM)

### ITLE

#### FEMA FLOOD INSURANCE RATE MAP

PROJECT

UNDEVELOPED LAND MULBERRY ROAD HARRISBURG, NORTH CAROLINA



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DATE: 10/21/2022 REVISION NO: 0

JOB NO: TCD-007 FIGURE NO: A5

Appendix B Survey Field Forms



Sacial Points:   County: Cabarrus County   County: Cabarrus Cabarrus County   County: Cabarrus Cabarrus County: Cabarrus County: Cabarrus County: Cabarrus County: Cabarrus Cabarrus County: Cabarrus Cabarrus County: Cabarrus C	Date: 10/11/2022	Project/Site: TC	D-007 Mulberry Road			Latitude:	
Stream   Determination: Ephemeral Intermittent   Perennial   Stream   Amage   Stream   Stream   Stream   Stream   Amage   Ama	Evaluator: DWM	County: Cabarru	s County			35.331708 Longitude:	
Stream is at least intermittent   1							
A. Geomorphology			Stream Determination: Epnemeral Intermittent Perennial				
Continuity of channel bed and bank*   0	27		Intermitte	ent		Stream A	
Continuity of channel bed and bank*	A Geomorphology Si	ubtotal = 13.5	Absent	Weak	Moderate	Strong	
Sinussity of channel along thalweg		<u></u>		1	2		
In-channel structure ax, riffle-pool, step-pool, ripple-pool sequence   0					_		
Particle size of stream substrate		pool, ripple-pool sequence	0	1	2	3	
S. Activerleict floodplain   0		F,					
3. Depositional bars or benches   0			0				
7. Recent alluvial deposits   0   1   2   3   3   1   2   3   3   1   1   5   5   5   5   5   5   5   5				1			
3. Headcuts   0			0	1	2	3	
3. Grade control       0       0.5       1       1.5         10. Natural valley       0       0.5       1       1.5         11. Second or greater order channel       No = 0       Yes = 3       1.5         23. Hydrology       Subtotal = 7.5       7.5       3       3       1.5							
10. Natural valley			0	0.5			
11. Second or greater order channel   No = 0   Yes = 3							
Artificial ditches are not rated; see discussions in manual   B. Hydrology   Subtotal = 7.5	,		No = 0	)	Yes:	= 3	
12. Presence of Baseflow   0	artificial ditches are not rated; see discussions	n manual					
3. Iron oxidizing bacteria   0   1   2   3   3   4. Leaf litter   1.5   1   0.5   0   0.5   0   0.5   1   1.5   1   0.5   0   0.5   0   0.5   1   1.5   0   0   0.5   0.5   0.5   0.5   0.5   0.5   0.5   0.5   0.5   0.5   0.5   0.5   0.5   0.5   0.5   0.5	3. Hydrology Su	ubtotal = <u>7.5</u>					
4. Leaf litter	2. Presence of Baseflow		0	1	2	3	
1.5   Sediment on plants or debris   0   0.5   1   1.5     1.6   Organic debris lines or piles   0   0.5   1   1.5     1.5   1.5   1.5     1.5   1.5   1.5     1.5   1.5   1.5     1.5   1.5     1.5   1.5     1.5   1.5     1.5   1.5     1.5   1.5     1.5   1.5     1.5   1.5     1.5   1.5     1.5   1.5     1.5   1.5     1.5   1.5     1.5   1.5     1.5   1.5     1.5   1.5     1.5   1.5     1.5   1.5     1.5   1.5     1.5   1.5     1.5	<ol><li>Iron oxidizing bacteria</li></ol>		0	1	2	3	
16. Organic debris lines or piles   0   0.5   1   1.5     17. Soil-based evidence of high water table?   No = 0   Yes = 3     18. Fibrous roots in streambed   3   2   1   0     19. Rooted upland plants in streambed   3   2   1   0     20. Macrobenthos (note diversity and abundance)   0   1   2   3     21. Aquatic Mollusks   0   1   2   3     22. Fish   0   0.5   1   1.5     23. Crayfish   0   0.5   1   1.5     24. Amphibians   0   0.5   1   1.5     25. Algae   0   0.5   1   1.5     26. Wetland plants in streambed   FACW = 0.75; OBL = 1.5 Other = 0     No = 0   No = 0   Yes = 3      1. Soil-based evidence of high water table?   No = 0     1. Soil-based evidence of high water table?   1.5     2	14. Leaf litter		1.5	1	0.5	0	
No = 0   Yes = 3	15. Sediment on plants or debris		0	0.5	1	1.5	
17. Soil-based evidence of high water table?	16. Organic debris lines or piles		0	0.5	1	1.5	
18. Fibrous roots in streambed   3   2   1   0     19. Rooted upland plants in streambed   3   2   1   0     20. Macrobenthos (note diversity and abundance)   0   1   2   3     21. Aquatic Mollusks   0   1   2   3     22. Fish   0   0.5   1   1.5     23. Crayfish   0   0.5   1   1.5     24. Amphibians   0   0.5   1   1.5     25. Algae   0   0.5   1   1.5     26. Wetland plants in streambed   FACW = 0.75; OBL = 1.5 Other = 0     The perennial streams may also be identified using other methods.		?	No = 0		Yes:		
19. Rooted upland plants in streambed     3     2     1     0       20. Macrobenthos (note diversity and abundance)     0     1     2     3       21. Aquatic Mollusks     0     1     2     3       22. Fish     0     0.5     1     1.5       23. Crayfish     0     0.5     1     1.5       24. Amphibians     0     0.5     1     1.5       25. Algae     0     0.5     1     1.5       26. Wetland plants in streambed     FACW = 0.75; OBL = 1.5 Other = 0     0       perennial streams may also be identified using other methods.   Notes:	3,	ubtotal = <u>6</u>		2	1 4	1 0	
20. Macrobenthos (note diversity and abundance)   0							
21. Aquatic Mollusks		200)			_		
22. Fish     0     0.5     1     1.5       23. Crayfish     0     0.5     1     1.5       24. Amphibians     0     0.5     1     1.5       25. Algae     0     0.5     1     1.5       26. Wetland plants in streambed reprennial streams may also be identified using other methods.    FACW = 0.75; OBL = 1.5 Other = 0  Others:		ice)					
23. Crayfish 0 0.5 1 1.5 24. Amphibians 0 0.5 1 1.5 25. Algae 0 0.5 1 1.5 26. Wetland plants in streambed FACW = 0.75; OBL = 1.5 Other = 0 0 perennial streams may also be identified using other methods.							
24. Amphibians     0     0.5     1     1.5       25. Algae     0     0.5     1     1.5       26. Wetland plants in streambed reprennial streams may also be identified using other methods.     FACW = 0.75; OBL = 1.5 Other = 0     0							
25. Algae  0 0.5 1 1.5  26. Wetland plants in streambed  FACW = 0.75; OBL = 1.5 Other = 0  perennial streams may also be identified using other methods.  Notes:							
26. Wetland plants in streambed FACW = 0.75; OBL = 1.5 Other = 0 0 perennial streams may also be identified using other methods.  Notes:							
perennial streams may also be identified using other methods.  Notes:							
Notes:		ath as math a da	FACW =	: 0.75; OBL = 1.5	Other = 0	0	
	perennial streams may also be identified using	other methods.					
	Notos:						
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A. Geomorphology Subtotal = 11 1. Continuity of channel bed and bank* 2. Sinuosity of channel along thalweg 3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence 4. Particle size of stream substrate 5. Active/relict floodplain 6. Depositional bars or benches 7. Recent alluvial deposits 8. Headcuts 9. Grade control 10. Natural valley 11. Second or greater order channel *artificial ditches are not rated; see discussions in manual  B. Hydrology Subtotal = 5.5  12. Presence of Baseflow 13. Iron oxidizing bacteria 14. Leaf litter 15. Sediment on plants or debris 16. Organic debris lines or piles 17. Soil-based evidence of high water table?  C. Biology Subtotal = 6	Intermitte   Absent	Weak  1 1 1 1 1 1 1 1 1 1 0.5 0.5	Moderate	3 3 0 1.5
A. Geomorphology  Subtotal = 11  1. Continuity of channel bed and bank* 2. Sinuosity of channel along thalweg 3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence 4. Particle size of stream substrate 5. Active/relict floodplain 6. Depositional bars or benches 7. Recent alluvial deposits 8. Headcuts 9. Grade control 10. Natural valley 11. Second or greater order channel *artificial ditches are not rated; see discussions in manual  B. Hydrology  Subtotal = 5.5  12. Presence of Baseflow 13. Iron oxidizing bacteria 14. Leaf litter 15. Sediment on plants or debris 16. Organic debris lines or piles 17. Soil-based evidence of high water table?  C. Biology  Subtotal = 6	Intermitted	Weak  1 1 1 1 1 1 1 1 1 0.5 0.5 0.5	Moderate  2 2 2 2 2 2 2 2 1 1 1 Yes =	Other Stream Name: Stream B  Strong  3 3 3 3 3 3 1.5 1.5 1.5 3 3 0 1.5 1.5
A. Geomorphology Subtotal = 11    Continuity of channel bed and bank*   Sinuosity of channel along thalweg   In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence   Particle size of stream substrate   Active/relict floodplain   Depositional bars or benches   Recent alluvial deposits   Grade control   On Natural valley   Second or greater order channel   Cartificial ditches are not rated; see discussions in manual   Active/relict floodplain   Depositional bars or benches   Cartificial ditches are not rated; see discussions in manual   Cartificial ditches are not rated; see discussions in manual   Cartificial ditches are not rated; see discussions in manual   Cartificial ditches are not rated; see discussions in manual   Cartificial ditches are not rated; see discussions in manual   Cartificial ditches are not rated; see discussions in manual   Cartificial ditches are not rated; see discussions in manual   Cartificial ditches are not rated; see discussions in manual   Cartificial ditches are not rated; see discussions in manual   Cartificial ditches are not rated; see discussions in manual   Cartificial ditches are not rated; see discussions in manual   Cartificial ditches are not rated; see discussions in manual	Absent  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Weak  1 1 1 1 1 1 1 1 1 0.5 0.5	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Stream B  Strong  3 3 3 3 3 3 3 1.5 1.5 1.5 3 3 1.5 1.5 1.5 3
1. Continuity of channel bed and bank* 2. Sinuosity of channel along thalweg 3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence 4. Particle size of stream substrate 5. Active/relict floodplain 6. Depositional bars or benches 7. Recent alluvial deposits 8. Headcuts 9. Grade control 10. Natural valley 11. Second or greater order channel 2 artificial ditches are not rated; see discussions in manual  B. Hydrology  Subtotal = 5.5  12. Presence of Baseflow 13. Iron oxidizing bacteria 14. Leaf litter 15. Sediment on plants or debris 16. Organic debris lines or piles 17. Soil-based evidence of high water table?  C. Biology  Subtotal = 6	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3 3 3 3 3 3 3 3 1.5 1.5 1.5
1. Continuity of channel bed and bank* 2. Sinuosity of channel along thalweg 3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence 4. Particle size of stream substrate 5. Active/relict floodplain 6. Depositional bars or benches 7. Recent alluvial deposits 8. Headcuts 9. Grade control 10. Natural valley 11. Second or greater order channel artificial ditches are not rated; see discussions in manual  B. Hydrology  Subtotal = 5.5  12. Presence of Baseflow 13. Iron oxidizing bacteria 14. Leaf litter 15. Sediment on plants or debris 16. Organic debris lines or piles 17. Soil-based evidence of high water table?  C. Biology  Subtotal = 6	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3 3 3 3 3 3 3 3 1.5 1.5 1.5
2. Sinuosity of channel along thalweg 3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence 4. Particle size of stream substrate 5. Active/relict floodplain 6. Depositional bars or benches 7. Recent alluvial deposits 8. Headcuts 9. Grade control 10. Natural valley 11. Second or greater order channel 2. Artificial ditches are not rated; see discussions in manual 3. Hydrology  Subtotal = 5.5  12. Presence of Baseflow 13. Iron oxidizing bacteria 14. Leaf litter 15. Sediment on plants or debris 16. Organic debris lines or piles 17. Soil-based evidence of high water table?  C. Biology  Subtotal = 6	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 1 1 1 1 1 1 0.5 0.5 0.5	2 2 2 2 2 2 1 1 1 Yes =	3 3 3 3 3 3 3 1.5 1.5 1.5
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence 4. Particle size of stream substrate 5. Active/relict floodplain 6. Depositional bars or benches 7. Recent alluvial deposits 8. Headcuts 9. Grade control 10. Natural valley 11. Second or greater order channel 12. artificial ditches are not rated; see discussions in manual 13. Hydrology 14. Leaf litter 15. Sediment on plants or debris 16. Organic debris lines or piles 17. Soil-based evidence of high water table? 18. Biology 19. Subtotal = 6	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 1 1 1 1 1 0.5 0.5 0.5	2 2 2 2 2 2 1 1 1 Yes =	3 3 3 3 3 3 1.5 1.5 1.5 3 3 0
## Particle size of stream substrate  5. Active/relict floodplain  5. Depositional bars or benches  7. Recent alluvial deposits  8. Headcuts  9. Grade control  10. Natural valley  11. Second or greater order channel  Partificial ditches are not rated; see discussions in manual  8. Hydrology  Subtotal = 5.5  12. Presence of Baseflow  13. Iron oxidizing bacteria  14. Leaf litter  15. Sediment on plants or debris  16. Organic debris lines or piles  17. Soil-based evidence of high water table?  C. Biology  Subtotal = 6	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 1 1 1 0.5 0.5 0.5	2 2 2 2 1 1 1 Yes =	3 3 3 3 3 1.5 1.5 1.5 3 3 0
5. Active/relict floodplain 5. Depositional bars or benches 7. Recent alluvial deposits 8. Headcuts 9. Grade control 10. Natural valley 11. Second or greater order channel *artificial ditches are not rated; see discussions in manual  B. Hydrology Subtotal = 5.5  12. Presence of Baseflow 13. Iron oxidizing bacteria 14. Leaf litter 15. Sediment on plants or debris 16. Organic debris lines or piles 17. Soil-based evidence of high water table?  C. Biology Subtotal = 6	0 0 0 0 0 0 0 No = 0	1 1 1 0.5 0.5 0.5	2 2 2 1 1 1 Yes =	3 3 3 1.5 1.5 3 3 3 0 1.5
6. Depositional bars or benches 7. Recent alluvial deposits 8. Headcuts 9. Grade control 10. Natural valley 11. Second or greater order channel 2 artificial ditches are not rated; see discussions in manual  8. Hydrology  Subtotal = 5.5  12. Presence of Baseflow 13. Iron oxidizing bacteria 14. Leaf litter 15. Sediment on plants or debris 16. Organic debris lines or piles 17. Soil-based evidence of high water table?  C. Biology  Subtotal = 6	0 0 0 0 0 No = 0	1 1 1 0.5 0.5 0.5 )	2 2 2 1 1 Yes =	3 3 3 1.5 1.5 3 3 0 1.5
7. Recent alluvial deposits 3. Headcuts 9. Grade control 10. Natural valley 11. Second or greater order channel  *artificial ditches are not rated; see discussions in manual  B. Hydrology  Subtotal = 5.5  12. Presence of Baseflow 13. Iron oxidizing bacteria 14. Leaf litter 15. Sediment on plants or debris 16. Organic debris lines or piles 17. Soil-based evidence of high water table?  C. Biology  Subtotal = 6	0 0 0 0 No = 0	1 0.5 0.5 0.5 )	2 2 1 1 1 Yes =	3 3 1.5 1.5 2 3 3 0 1.5
3. Headcuts 9. Grade control 10. Natural valley 11. Second or greater order channel artificial ditches are not rated; see discussions in manual  B. Hydrology Subtotal = 5.5  12. Presence of Baseflow 13. Iron oxidizing bacteria 14. Leaf litter 15. Sediment on plants or debris 16. Organic debris lines or piles 17. Soil-based evidence of high water table?  C. Biology Subtotal = 6	0 0 0 No = 0	1 0.5 0.5 0.5 1 1 1 0.5	2 1 1 Yes =	3 1.5 1.5 3 3 0 1.5
9. Grade control 10. Natural valley 11. Second or greater order channel  artificial ditches are not rated; see discussions in manual  B. Hydrology  Subtotal = 5.5  12. Presence of Baseflow 13. Iron oxidizing bacteria 14. Leaf litter 15. Sediment on plants or debris 16. Organic debris lines or piles 17. Soil-based evidence of high water table?  C. Biology  Subtotal = 6	0 0 No = 0	0.5 0.5 0.5	1 1 Yes =	1.5 1.5 3 3 0 1.5
10. Natural valley 11. Second or greater order channel  *artificial ditches are not rated; see discussions in manual  B. Hydrology  Subtotal = 5.5  12. Presence of Baseflow 13. Iron oxidizing bacteria 14. Leaf litter 15. Sediment on plants or debris 16. Organic debris lines or piles 17. Soil-based evidence of high water table?  C. Biology  Subtotal = 6	0 No = 0	0.5 1 1 1 0.5	1 Yes =	3 3 0 1.5
11. Second or greater order channel  artificial ditches are not rated; see discussions in manual  B. Hydrology  Subtotal = 5.5  12. Presence of Baseflow 13. Iron oxidizing bacteria 14. Leaf litter 15. Sediment on plants or debris 16. Organic debris lines or piles 17. Soil-based evidence of high water table?  C. Biology  Subtotal = 6	0 0 0 1.5 0	1 1 1 0.5	Yes = 2 2 0.5 1	3 3 0 1.5
*artificial ditches are not rated; see discussions in manual  B. Hydrology  Subtotal = 5.5  12. Presence of Baseflow 13. Iron oxidizing bacteria 14. Leaf litter 15. Sediment on plants or debris 16. Organic debris lines or piles 17. Soil-based evidence of high water table?  C. Biology  Subtotal = 6	0 0 1.5 0	1 1 1 0.5	2 2 0.5 1	3 3 0 1.5
12. Presence of Baseflow  13. Iron oxidizing bacteria  14. Leaf litter  15. Sediment on plants or debris  16. Organic debris lines or piles  17. Soil-based evidence of high water table?  C. Biology  Subtotal = 6	0 1.5 0	1 1 0.5	2 0.5 1	3 0 1.5
13. Iron oxidizing bacteria 14. Leaf litter 15. Sediment on plants or debris 16. Organic debris lines or piles 17. Soil-based evidence of high water table?  C. Biology Subtotal = 6	0 1.5 0	1 1 0.5	2 0.5 1	3 0 1.5
14. Leaf litter 15. Sediment on plants or debris 16. Organic debris lines or piles 17. Soil-based evidence of high water table?  C. Biology Subtotal = 6	1.5 0 0	1 0.5	0.5	0 1.5
15. Sediment on plants or debris  16. Organic debris lines or piles  17. Soil-based evidence of high water table?  C. Biology Subtotal = 6	0	0.5	1	1.5
16. Organic debris lines or piles 17. Soil-based evidence of high water table?  C. Biology Subtotal = 6	0			
17. Soil-based evidence of high water table?  C. Biology Subtotal = 6		0.5	1	
C. Biology Subtotal = <u>6</u>	No = 0			1.5
		)	Yes =	. 3
40 = 1			_	
18. Fibrous roots in streambed	3	2	1	0
19. Rooted upland plants in streambed	3	2	1	0
20. Macrobenthos (note diversity and abundance)	0	1	2	3
21. Aquatic Mollusks	0	1	2	3
22. Fish	0	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0	0.5	1	1.5
25. Algae	0	0.5	1	1.5
26. Wetland plants in streambed	FACW =	: 0.75; OBL = 1.5 (	Other = 0	0
perennial streams may also be identified using other methods.				
Notes:				
Sketch:				

NC DWQ Stream Identification Form		0.007 Mullbery Road			Latitude:
240. 10, 17, 2022	Trojectione: Tob	7.007 Malibery Road			35.328794
Evaluator: DWM	County: Cabarrus	County			Longitude: -80.611589
Total Points:	Strea	m Determination: Ephemer	al Intermittent P	erennial	Other
Stream is at least intermittent if $\geq$ 19 or perennial if $\geq$ 30*					Stream Name:
26		Intermitte	ent		Stream C
				1	<b>.</b>
A. Geomorphology Subtota	l = <u>12.5</u>	Absent	Weak	Moderate	Strong
1. Continuity of channel bed and bank*		0	1	2	3
Sinuosity of channel along thalweg     In-channel structure: ex. riffle-pool, step-pool, rights are channel.	anla naol aggrega	0	<u>1</u> 1	2	3
In-channel structure: ex. fille-pool, step-pool, fig.     Particle size of stream substrate	opie-pooi sequence	0 0	<u> </u>	2 2	3
5. Active/relict floodplain		0	1	2	3
6. Depositional bars or benches		0	1	2	3
7. Recent alluvial deposits		0	1	2	3
8. Headcuts		0	1	2	3
9. Grade control		0	0.5	1	1.5
10. Natural valley		0	0.5	1	1.5
11. Second or greater order channel		No = 0		Yes	= 3
*artificial ditches are not rated; see discussions in manua	al				
B. Hydrology Subtotal	= <u>7.5</u>				
12. Presence of Baseflow		0	1	2	3
13. Iron oxidizing bacteria		0	1	2	3
14. Leaf litter		1.5	1	0.5	0
15. Sediment on plants or debris		0	0.5	1	1.5
16. Organic debris lines or piles		0	0.5	1	1.5
17. Soil-based evidence of high water table?		No = 0		Yes	= 3
C. Biology Subtota	I = <u>6</u>				
18. Fibrous roots in streambed		3	2	1	0
19. Rooted upland plants in streambed		3	2	1	0
20. Macrobenthos (note diversity and abundance) 21. Aquatic Mollusks		0	<u> </u>	2 2	3
22. Fish		0	0.5	1	1.5
23. Crayfish		0	0.5	1	1.5
24. Amphibians		0	0.5	1	1.5
25. Algae		0	0.5	1	1.5
26. Wetland plants in streambed			0.75; OBL = 1.5		0
*perennial streams may also be identified using other me	ethods.	171011	0.70, 002 - 1.0	01101 = 0	U
Notes:					
Sketch:					

Evaluator: DWM    Country: Cabarrus County	Date: 10/11/22	Project/Site: TCD.	007 Mullbery Road			Latitude:
Stream Determination: Ephemeral Intermittent Perennial   Stream Name: Stream is at least intermittent # ≥ 19 or perennial # ≥ 30°   Intermittent   Stream Determination: Ephemeral Intermittent   Perennial   Other Stream Name: Stream Determination: Ephemeral Intermittent   Perennial   Stream Determination: Ephemeral Intermittent   Perennial   Other Stream Name: Stream Determination: Ephemeral Intermittent   Perennial   Stream Determination: Ephemeral Intermittent   Perennial   Other Stream Determination: Ephemeral Intermittent   Perennial Stream   Other Stream Determination: Ephemeral Intermittent   Perennial Stream   Other Stream Determination: Ephemeral Intermittent   Perennial Stream Determination: Ephemeral Intermittent   Perennial Stream   Perennial Stream   Other S	Fredrick DWM	Oto O h (	2			35.329018
Stream Determination: Ephemeral Intermittent Perennial	Evaluator: DWM	County: Cabarrus C	County			
A. Geomorphology Subtotal = 13.5 Absent Weak Moderate Strong  1. Continuity of channel bed and bank*  0 1 1 2 3 2. Sinusoity of channel along thalweg 0 1 1 2 3 3. Particle size of stream substrate 0 1 1 2 3 3. Particle size of stream substrate 0 1 1 2 3 3. Personal to the stream substrate 0 1 1 2 3 3. Depositional bars or benches 0 1 1 2 3 3. Depositional bars or benches 0 1 1 2 3 3. Depositional bars or benches 0 1 1 2 3 3. Depositional bars or benches 0 1 1 2 3 3. Depositional bars or benches 0 1 1 2 3 3. Depositional bars or benches 0 1 1 2 3 3. Depositional deposits 0 0 1 2 3 3. Depositional deposits 0 0 1 2 3 3. Depositional deposits 0 0 1 2 3 3. Depositional bars or benches 0 0 1 2 3 3. Depositional deposits 0 0 0.5 1 1 1.5 10. Natural valley 0 0 0.5 1 1 1.5 11. Second or greater order channel No = 0 Yes = 3 2. Personal deposits 3. Headcuts 3. Hydrology Subtotal = 8  12. Presence of Baseflow 13. Iron oxidizing bacteria 0 0 1 2 3 3. Iron oxidizing bacteria 0 0 1 2 3 3. Iron oxidizing bacteria 1.5 1 0.5 0 15. Sediment on plants or debris 0 0 0.5 1 1 1.5 15. On 0.5 0 15. Sediment on plants or debris 0 0 0.5 1 1.5 17. Sol-based evidence of high water table? No = 0 Yes = 3  C. Biology Subtotal = 4  18. Fibrous roots in streambed 3 2 2 1 0 0 0.5 1 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5	Total Points:	Stream	Determination: Ephemer	al Intermittent P	erennial	
A. Geomorphology  Subtotal = 13.5  Absent Weak Moderate Strong  1. Continuity of channel bed and bank*  2. Sinusoity of channel storucher ex. riffle-pool, step-pool, ripple-pool sequence  3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence  4. Continuity of channel along thalwag  5. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence  6. O 1 2 2 3  7. Particles size of stream substrate  7. Particles size of stream substrate  8. Continuity of channel along thalwag  9. O 1 2 2 3  9. Active relict floodplain  9. O 1 2 2 3  9. Active relict floodplain  9. O 1 2 2 3  9. Fracent alluvial deposits  9. O 1 1 2 3  9. Fracent alluvial deposits  9. O 1 1 2 3  9. Grade control  10. Natural vailey  10. O 0.5 1 1 1.5  11. Second or greater order channel  8. Hydrology  Subtotal = 8  8. Hydrology  Subtotal = 9  9. O 0.5 1 1 1.5  1.5 0.5 0  1.5 ediment on plants or debris  1.5 1 0.5 0  1.5 ediment on plants or debris  1.5 1 0.5 0  1.5 ediment on plants or debris  1.5 1 0.5 0  1.5 ediment on plants or debris  1.5 1 0.5 0  1.5 ediment on plants or debris  1.5 1 0.5 0  1.5 ediment on plants or debris  1.5 1 0.5 0  1.5 2 3  1.5 2 3  1.5 2 3  1.5 3 3  2. 1 1 0  2.0 Macrobenthos (note diversity and abundance)  1.5 1.5 2 3  2. Fish  1.5 0.0 0.5 1 1 1.5  1.5 2.0 3  2.7 rayfish  1.5 0.0 0.5 1 1 1.5  2.4 Amphibians  1.5 1.5 0.0 0.5 1 1 1.5  2.6 Algae  9. 0 0.5 1 1 1.5  2.6 Algae  9. 0 0.5 1 1 1.5  2.7 Algaetic Millsuks  9. 0 0.5 1 1 1.5  2.7 Algaetic Millsuks  9. 0 0.5 1 1 1.5  2.7 Algaetic Millsuks  9. 0 0.5 1 1 1.5  2.7 Algaetic Millsuks  9. 0 0.5 1 1 1.5  2.7 Algaetic Millsuks  9. 0 0.5 1 1 1.5  2.7 Algaetic Millsuks  9. 0 0.5 1 1 1.5  2.7 Algaetic Millsuks  9. 0 0.5 1 1 1.5  2.7 Algaetic Millsuks  9. 0 0.5 1 1 1.5  2.7 Algaetic Millsuks  9. 0 0.5 1 1 1.5  2.7 Algaetic Mills	Stream is at least intermittent if $\geq$ 19 or perennial if $\geq$	≥ 30*				
Continuity of channel bed and bank*   0	25.5		Intermitte	ent		Stream D
Continuity of channel bed and bank*   0		·				
Sinustry of channel along thalweg		total = <u>13.5</u>	Absent	Weak	Moderate	Strong
In-channel structure av, riffle-pool, step-pool, ripple-pool sequence   0						
Particle size of stream substrate   0		<del> </del>				
S. Active/relict floodplain   0	In-channel structure: ex. riffle-pool, step-pool	ol, ripple-pool sequence				
3. Depositional bars or benches   0				•		
7. Recent alluvial deposits   0						
Neadouts						
9. Grade control       0       0.5       1       1.5         10. Natural valley       0       0.5       1       1.5         1. Second or greater order channel       No = 0       Yes = 3       3         antificial ditches are not rated; see discussions in manual       3.       Hydrology       Subtotal = 8       8         12. Presence of Baseflow       0       1       2       3         3. Iron oxidizing bacteria       0       1       2       3         4. Leaf litter       1.5       1       0.5       0         15. Sediment on plants or debris       0       0.5       1       1.5         16. Organic debris lines or piles       0       0.5       1       1.5         17. Soil-based evidence of high water table?       No = 0       Yes = 3     C. Biology  Subtotal = 4   B. Fibrous roots in streambed  3 2 1 1 0 0 0. Macrobenthos (note diversity and abundance)  3 2 1 1 0 0 0. Macrobenthos (note diversity and abundance)  3 2 2 1 0 0 1 2 3 0 0 1 2 3 0 0 1 2 3 0 0 1 2 3 0 0 1 1 2 3 0 0 1 1 2 3 0 0 1 1 1 5 0 0 0 0.5 1 1 1.5 0 0 0 0.5 1 1				•		
10. Natural valley						
1. Second or greater order channel   No = 0   Yes = 3						
Subtotal =   8						
2. Presence of Baseflow   0		nanual				
2. Presence of Baseflow 3. Iron oxidizing bacteria 0 1 2 3 4. Leaf litter 1.5 1 0.5 0 6. Sediment on plants or debris 6. Organic debris lines or piles 0 0.5 1 1.5 7. Soil-based evidence of high water table? No = 0 Yes = 3  8. Fibrous roots in streambed 9. Rooted upland plants in streambed uplants in streambed up						
3   Iron oxidizing bacteria   0   1   2   3     4. Leaf litter   1.5   1   0.5   0     5. Sediment on plants or debris   0   0.5   1   1.5     6. Organic debris lines or piles   0   0.5   1   1.5     7. Soil-based evidence of high water table?   No = 0   Yes = 3     8. Fibrous roots in streambed   3   2   1   0     9. Rooted upland plants in streambed   3   2   1   0     9. Rooted upland plants in streambed   3   2   1   0     9. Rooted widence of high water table?   0   1   2   3     12. Fish   0   0.5   1   1.5     13. Crayfish   0   0.5   1   1.5     14. Aquatic Mollusks   0   0.5   1   1.5     15. Algae   0   0.5   1   1.5     16. Wetland plants in streambed   0   0.5   1   1.5     17. Even of the property of the prope	3. Hydrology Subt	otal = <u>8</u>				
4. Leaf litter       1.5       1       0.5       0         5. Sediment on plants or debris       0       0.5       1       1.5         6. Organic debris lines or piles       0       0.5       1       1.5         7. Soil-based evidence of high water table?       No = 0       Yes = 3              2. Biology       Subtotal = 4     8. Fibrous roots in streambed  9. Rooted upland plants in streambed  9. Rooted upland plants in streambed  3 2 1 1 0 0 0. Macrobenthos (note diversity and abundance)  10. Macrobenthos (note diversity and abundance)  11. Aquatic Mollusks  0 1 2 3 0.1. Aquatic Mollusks  0 0 0.5 1 1 1.5 0.3. Crayfish  0 0.5 1 1 1.5 0.5 0.5 1 1 1.5 0.5 0.5 1 1 1.5 0.5 0.6 Wetland plants in streambed  FACW = 0.75; OBL = 1.5 Other = 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			0	1		
1.5   1.5						
1.5   1.5						
7. Soil-based evidence of high water table?  8. Fibrous roots in streambed  9. Rooted upland plants in streambed  10. Macrobenthos (note diversity and abundance)  11. Aquatic Mollusks  12. Fish  13. Crayfish  14. Amphibians  15. Algae  16. Wetland plants in streambed  17. Soil-based evidence of high water table?  18. Fibrous roots in streambed  3	5. Sediment on plants or debris		0	0.5	1	1.5
Subtotal   4    Subtotal   5    Subtotal   5			0	0.5	1	1.5
18. Fibrous roots in streambed   3   2   1   0     19. Rooted upland plants in streambed   3   2   1   0     20. Macrobenthos (note diversity and abundance)   0   1   2   3     21. Aquatic Mollusks   0   1   2   3     22. Fish   0   0.5   1   1.5     23. Crayfish   0   0.5   1   1.5     24. Amphibians   0   0.5   1   1.5     25. Algae   0   0.5   1   1.5     26. Wetland plants in streambed   FACW = 0.75; OBL = 1.5 Other = 0     26. Wetland plants in streams may also be identified using other methods.	17. Soil-based evidence of high water table?		No = 0	1	Yes	= 3
18. Fibrous roots in streambed 19. Rooted upland plants in streambed 20. Macrobenthos (note diversity and abundance) 21. Aquatic Mollusks 22. Fish 23. Crayfish 24. Amphibians 25. Algae 26. Wetland plants in streambed 27. Algae tidentified using other methods.	C Riology Sub	statal – 4				
9. Rooted upland plants in streambed     3     2     1     0       20. Macrobenthos (note diversity and abundance)     0     1     2     3       21. Aquatic Mollusks     0     1     2     3       22. Fish     0     0.5     1     1.5       23. Crayfish     0     0.5     1     1.5       24. Amphibians     0     0.5     1     1.5       25. Algae     0     0.5     1     1.5       26. Wetland plants in streambed     FACW = 0.75; OBL = 1.5 Other = 0     0       perennial streams may also be identified using other methods.   Notes:	5. Biology Sub	total = <u>4</u>				
20. Macrobenthos (note diversity and abundance)   0	8. Fibrous roots in streambed		3	2	1	0
21. Aquatic Mollusks   0				2		
22. Fish		.)	0	11	2	3
23. Crayfish   0   0.5   1   1.5     24. Amphibians   0   0.5   1   1.5     25. Algae   0   0.5   1   1.5     26. Wetland plants in streambed   FACW = 0.75; OBL = 1.5 Other = 0   0     27. perennial streams may also be identified using other methods.						
24. Amphibians     0     0.5     1     1.5       25. Algae     0     0.5     1     1.5       26. Wetland plants in streambed     FACW = 0.75; OBL = 1.5 Other = 0     0       perennial streams may also be identified using other methods.   Notes:						
25. Algae  0 0.5 1 1.5 26. Wetland plants in streambed FACW = 0.75; OBL = 1.5 Other = 0 0 perennial streams may also be identified using other methods.  Notes:						
26. Wetland plants in streambed  perennial streams may also be identified using other methods.  Notes:	•					
perennial streams may also be identified using other methods.  Notes:	25 Algae					1.5
Notes:			FACW =	0.75; OBL = 1.5	Other = 0	0
	6. Wetland plants in streambed		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
	6. Wetland plants in streambed	er methods.	.,			
Sketch:	26. Wetland plants in streambed perennial streams may also be identified using oth	er methods.	1 176			
Sketch:	26. Wetland plants in streambed perennial streams may also be identified using oth	er methods.	1			
Sketch:	26. Wetland plants in streambed perennial streams may also be identified using oth	er methods.	,			
SKEICH:	26. Wetland plants in streambed perennial streams may also be identified using oth	er methods.				
	26. Wetland plants in streambed perennial streams may also be identified using othe Notes:	er methods.				
	26. Wetland plants in streambed perennial streams may also be identified using othe Notes:	er methods.				
	26. Wetland plants in streambed perennial streams may also be identified using othe Notes:	er methods.				
	26. Wetland plants in streambed perennial streams may also be identified using othe Notes:	er methods.				
	26. Wetland plants in streambed perennial streams may also be identified using othe Notes:	er methods.				
	26. Wetland plants in streambed perennial streams may also be identified using other Notes:	er methods.				
	26. Wetland plants in streambed perennial streams may also be identified using othe Notes:	er methods.				
	6. Wetland plants in streambed perennial streams may also be identified using othe Notes:	er methods.				
	26. Wetland plants in streambed perennial streams may also be identified using othe Notes:	er methods.				
	26. Wetland plants in streambed perennial streams may also be identified using othe Notes:	er methods.				

Evaluator: JKM     County: Cabarrus     Long -80.6       Total Points:     Stream Determination: Ephemeral Intermittent Perennial     Othe Stream is at least intermittent if ≥ 19 or perennial if ≥ 30*	Date: 10/11/22	Project/Site: TCD.	006			Latitude:
3-80.6						35.329794
Stream Determination: Ephemeral Intermittent Perennial   Stream is at least intermittent # ≥ 19 or perennial # ≥ 30°   Perennial   Stream   Perennial   Perennial   Stream   Perennial	Evaluator: JKM	County: Cabarrus				Longitude:
Stream is at least intermittent if ≥ 19 or perennial if ≥ 30°   A2.5   Perennial   Rock   A2.5   Perennial   Rock   Rock   A2.5   Absent   Weak   Moderate   Rock   A2.5   Absent   Weak   Moderate   Rock   A2.5   Absent   Moderate   Rock   A2.5   Absent   A2.5	F ( I D ) (	04	Determination February			-80.617798
A. Geomorphology   Subtotal   22.5   Absent   Weak   Moderate			Determination: Epnemer	al Intermittent P	erenniai	Otner Stream Name:
A. Geomorphology  1. Continuity of channel bed and bank* 1. Continuity of channel bed and bank* 1. Continuity of channel bed and bank* 1. Continuity of channel along thalweg	Stream is at least intermittent if 2 19 or perennial if :	2 30-				Rocky River
1. Continuity of channel bed and bank*	42.5		Perenni	al		Nocky Niver
1. Continuity of channel bed and bank*					T	_
2. Sinusity of channel along thalweg	1	total = <u>22.5</u>	Absent	Weak	Moderate	Strong
In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence   0			0	1	2	3
A Particle size of stream substrate						3
S. Active/relict floodplain   Comment   Comm		ol, ripple-pool sequence		1		3
B. Depositional bars or benches   0						3
7. Recent alluvial deposits						3
3. Headcuts   0   1   2   1   1   1   2   1   1   1   2   1   1	5. Depositional bars or benches					3
O. Rade control   O. Natural valley   O. 0.5   1   O. No = 0   Yes = 3						3
10. Natural valley			-			3
1. Second or greater order channel   No = 0   Yes = 3						1.5
Artificial ditches are not rated; see discussions in manual   Sa. Hydrology   Subtotal = 11   11   11   12   13   14   15   15   15   16   15   16   16   16						1.5
Subtotal = 11   11   12   13   14   15   15   16   16   16   16   16   16			No = 0	)	Yes =	= 3
12. Presence of Baseflow   0	artificial ditches are not rated; see discussions in r	nanual				
3. Iron oxidizing bacteria   0   1   2	-	otal = <u>11</u>				
4. Leaf litter 5. Sediment on plants or debris 6. Organic debris lines or piles 7. Soil-based evidence of high water table?  C. Biology  Subtotal = 9  8. Fibrous roots in streambed 9. Rooted upland plants in streambed 13 2 1 1 20. Macrobenthos (note diversity and abundance) 11. Aquatic Mollusks 12. Fish 13. Crayfish 14. Amphibians 15. Algae 16. Wetland plants in streambed 17. Algastic Mollus in streambed 18. O 0 0.5 1 18. Crayfish 18. O 0 0.5 1 18. Crayfish 19. Crayfis			0	1	2	3
5. Sediment on plants or debris   0   0.5   1	Iron oxidizing bacteria		0	1	2	3
16. Organic debris lines or piles			1.5		0.5	0
No = 0   Yes = 3	<ol><li>Sediment on plants or debris</li></ol>		0	0.5	1	1.5
No = 0   Yes = 3	16. Organic debris lines or piles		0	0.5	1	1.5
18. Fibrous roots in streambed 19. Rooted upland plants in streambed 20. Macrobenthos (note diversity and abundance) 21. Aquatic Mollusks 22. Fish 23. Crayfish 24. Amphibians 25. Algae 26. Wetland plants in streambed 26. Wetland plants in streambed 27. Factor of the diversity and abundance) 28. The diversity and abundance of the diversity	17. Soil-based evidence of high water table?		No = 0	)	Yes :	= 3
19. Rooted upland plants in streambed   3		total = <u>9</u>	3	2	1	0
20. Macrobenthos (note diversity and abundance)   0					_	0
21. Aquatic Mollusks   0		1				3
22. Fish       0       0.5       1         23. Crayfish       0       0.5       1         24. Amphibians       0       0.5       1         25. Algae       0       0.5       1         26. Wetland plants in streambed perennial streams may also be identified using other methods.       FACW = 0.75; OBL = 1.5 Other = 0         Notes:		)				3
23. Crayfish  24. Amphibians  25. Algae  26. Wetland plants in streambed  27. PACW = 0.75; OBL = 1.5 Other = 0  28. PACW = 0.75; OBL = 1.5 Other = 0  29. PACW = 0.75; OBL = 1.5 Other = 0  29. PACW = 0.75; OBL = 1.5 Other = 0					_	1.5
24. Amphibians  0 0.5 1  25. Algae  0 0.5 1  26. Wetland plants in streambed perennial streams may also be identified using other methods.  Notes:						1.5
25. Algae  26. Wetland plants in streambed  27. FACW = 0.75; OBL = 1.5 Other = 0  28. Wetland plants in streambed  38. FACW = 0.75; OBL = 1.5 Other = 0  38. FACW = 0.75; OBL = 1.5 Other = 0  38. FACW = 0.75; OBL = 1.5 Other = 0					1	1.5
26. Wetland plants in streambed perennial streams may also be identified using other methods.  Notes:						1.5
perennial streams may also be identified using other methods.  Notes:					-	0
Notes:		er methods	racw =	0.75, OBL = 1.5	Other = 0	U
	perentilal streams may also be identified using our	er metrious.				
	lata a					
Sketch:	Notes:					
Sketch:						
Sketcn:	Olastala.					
	sketch:					

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Mulberry Road (TCD.007)		City/County: Harrisburg		Sampling Date: 10-11-22
Applicant/Owner: Trammel Crow Company			State: NC	Sampling Point: TP1
Investigator(s): DWM	S	Section, Township, Range: 0	Cabarrus	
Landform (hillside, terrace, etc.): swale	Loca	I relief (concave, convex, no	one): concave	Slope (%): 2
Subregion (LRR or MLRA): LRR P, MLRA 136	Lat: 35.330139	Long: -80	).617693	Datum: NAD83
Soil Map Unit Name: Chewacla and Wehadkee	soils, 0 to 2 percent slope	es, frequently flooded (ChA)	NWI classificati	ion: None
Are climatic / hydrologic conditions on the site type	pical for this time of year?	Yes X	No (If no, e	xplain in Remarks.)
Are Vegetation, Soil, or Hydrolog	gysignificantly distu	rbed? Are "Normal Circ	cumstances" present?	Yes X No
Are Vegetation, Soil, or Hydrolog	yynaturally problem	natic? (If needed, expla	ain any answers in Ren	narks.)
SUMMARY OF FINDINGS – Attach si	ite map showing sa	mpling point location	ոs, transects, imբ	portant features, etc.
Hydrophytic Vegetation Present? Ye	es X No	Is the Sampled Area		
		within a Wetland?	Yes_X_	No
l	es X No			
Remarks:  Data point is representative of jurisdictional wetl	land 'A'			
HYDROLOGY				
Wetland Hydrology Indicators:		9	Secondary Indicators (I	minimum of two required)
Primary Indicators (minimum of one is required;	check all that apply)		Surface Soil Crack	s (B6)
X Surface Water (A1)	True Aquatic Plants (B	14)	Sparsely Vegetate	d Concave Surface (B8)
X High Water Table (A2)	Hydrogen Sulfide Odor	(C1)	Drainage Patterns	(B10)
X Saturation (A3)	Oxidized Rhizospheres	on Living Roots (C3)	Moss Trim Lines (E	316)
Water Marks (B1)	Presence of Reduced I	ron (C4)	Dry-Season Water	Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction	in Tilled Soils (C6)	Crayfish Burrows (	
Drift Deposits (B3)	Thin Muck Surface (C7	· —		on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Rema	arks)	Stunted or Stresse	
Iron Deposits (B5)		_	Geomorphic Position	
Inundation Visible on Aerial Imagery (B7)		-	Shallow Aquitard (I	
Water-Stained Leaves (B9)		-	Microtopographic F	, ,
Aquatic Fauna (B13)			X FAC-Neutral Test (	(D5)
Field Observations:				
	No Depth (inches			
	No Depth (inches			
	No Depth (inches	): 0 Wetland Hy	ydrology Present?	Yes <u>X</u> No
(includes capillary fringe)	oring wall carial photos as	rovious inspections) if avail	able:	
Describe Recorded Data (stream gauge, monito	oring well, aerial photos, pi	revious inspections), if availa	adie:	
Remarks: Indicators of wetland hydrology are present.				

	A. I	of plants.		Sampling Poi	
Troc Stratum (Diataiza: 20 )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
Tree Stratum (Plot size: 30 )	% Cover	Species?	Status	Dominance Test worksneet:	
·				Number of Dominant Species	
2				That Are OBL, FACW, or FAC:	2 (A)
3				Total Number of Dominant	
4				Species Across All Strata:	2 (B)
5.				Percent of Dominant Species	
<u></u> 6.				That Are OBL, FACW, or FAC:	100.0% (A/B)
7.				Prevalence Index worksheet:	`` <u>`</u>
·		=Total Cover		Total % Cover of:	Multiply by:
50% of total cover:		of total cover:			1 =
Sapling/Shrub Stratum (Plot size: 15 )					2 =
.					3 =
<u> </u>				· —	1 =
i. ,				· —	5 =
				Column Totals: (A)	(B)
. <u> </u>				Prevalence Index = B/A	=
i. ]		·		Hydrophytic Vegetation Indicate	ors:
·				1 - Rapid Test for Hydrophytic	Vegetation
i.				X 2 - Dominance Test is >50%	3
·				3 - Prevalence Index is ≤3.0¹	
·		Total Caver		4 - Morphological Adaptations	1 (Provide supporting
		=Total Cover		data in Remarks or on a se	
50% of total cover:	20%	of total cover:			,
Herb Stratum (Plot size: 5 )				Problematic Hydrophytic Vege	etation¹ (Explain)
. Carex lurida	30	Yes	OBL	<sup>1</sup> Indicators of hydric soil and wetla	nd hydrology must be
. Juncus effusus	20	Yes	FACW	present, unless disturbed or proble	ematic.
. Impatiens capensis	10	No	FACW	Definitions of Four Vegetation S	Strata:
				Tree – Woody plants, excluding vi	nes, 3 in. (7.6 cm) or
i.				more in diameter at breast height	
				height.	
				Sanling/Shrub Woody plants of	voluding vinos Issa
·				Sapling/Shrub – Woody plants, e than 3 in. DBH and greater than o	
				m) tall.	r equal to 0.20 it
·				,	
0				Herb – All herbaceous (non-wood	
1				of size, and woody plants less tha	n 3.28 π tall.
	60 :	=Total Cover		Woody Vine – All woody vines gr	eater than 3.28 ft in
50% of total cover:3	20%	of total cover:	12	height.	
Voody Vine Stratum (Plot size: 30 )					
<u> </u>					
)					
4.					
3				Hydrophytic	
4.		=Total Cover		Hydrophytic Vegetation	

SOIL Sampling Point: TP1

	•	o the dep		nent the		or or co	nfirm the absence of	f indicators.)			
Depth (inches)	Matrix	%				Loc <sup>2</sup>	Toyturo	Domarka			
(inches)	Color (moist)		Color (moist)	<u>%</u>	Type <sup>1</sup>		Texture	Remarks			
0-4	10YR 3/1	90	10YR 5/6	10	<u>C</u>	M	Loamy/Clayey	Prominent redox concentrations			
4-18	10YR 3/1	85	10YR 5/6	15	<u> </u>	<u>M</u>	Loamy/Clayey	Prominent redox concentrations			
<sup>1</sup> Type: C=Co	ncentration, D=Deple	etion, RM=	=Reduced Matrix, MS	S=Mask	ed Sand	Grains.		n: PL=Pore Lining, M=Matrix. cators for Problematic Hydric Soils <sup>3</sup> :			
Histosol (	'A1)		Polyvalue Be	low Sur	face (S8)	(MLRA	147. 148)	2 cm Muck (A10) <b>(MLRA 147)</b>			
	ipedon (A2)		Thin Dark Su					Coast Prairie Redox (A16)			
Black His			Loamy Mucky					(MLRA 147, 148)			
	n Sulfide (A4)		Loamy Gleye			130		Piedmont Floodplain Soils (F19)			
	Layers (A5)		Depleted Mat					(MLRA 136, 147)			
	ck (A10) <b>(LRR N)</b>		X Redox Dark S					Red Parent Material (F21)			
	Below Dark Surface	(A11)	Depleted Dar		` '			(outside MLRA 127, 147, 148)			
	rk Surface (A12)	( ,	Redox Depre		` '			Very Shallow Dark Surface (F22)			
	ucky Mineral (S1)		Iron-Mangane			2) (LRR N		Other (Explain in Remarks)			
	eyed Matrix (S4)		MLRA 136		`	, (	· —	,			
	edox (S5)		X Umbric Surfa	•	) (MLRA	122, 136	) <sup>3</sup> Indi	cators of hydrophytic vegetation and			
	Matrix (S6)		Piedmont Flo								
Dark Sur			Red Parent N								
	ayer (if observed):				(· = · / <b>(···</b>		1	annoce dictarged or programmatic.			
Type:	ayer (ii observea).										
Depth (in	ches).						Hydric Soil Prese	ent? Yes X No			
Remarks:	<u> </u>						1 Tryano con 1 Test	103 <u>X</u> 10			
This data form Version 8.0, 2			ntains and Piedmont	Regiona	al Supple	ment Ver	sion 2.0 to include th	e NRCS Field Indicators of Hydric Soils,			

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Mulberry Road (TCD.007)	City/County: Harrisburg Sampling Date: 10-11-22									
Applicant/Owner: Trammel Crow Compa										
Investigator(s): DWM	· · · · · · · · · · · · · · · · · · ·									
Landform (hillside, terrace, etc.): hillside	Lo	ocal relief (concave, convex,		Slope (%):						
Subregion (LRR or MLRA): LRR P, MLRA		•	80.614469	Datum:	NAD83					
Soil Map Unit Name: Pacolet sandy loam, 2				ication: none	10.200					
Are climatic / hydrologic conditions on the site	•	•		o, explain in Remark	s )					
Are Vegetation, Soil, or Hydro	• • • • • • • • • • • • • • • • • • • •		Circumstances" preser							
Are Vegetation, Soil, or Hydro			plain any answers in I							
SUMMARY OF FINDINGS – Attack			-		res, etc.					
Hydrophytic Vegetation Present?	Yes X No	Is the Sampled Area								
Hydric Soil Present?	Yes No X	within a Wetland?	Yes	No X						
Wetland Hydrology Present?	Yes No X									
Remarks:  Data point is representative of a non-jurisdic	tional upland area near juri	sdictional wetland 'A'								
HYDROLOGY										
Wetland Hydrology Indicators:			Secondary Indicator	rs (minimum of two r	equired)					
Primary Indicators (minimum of one is requi	red; check all that apply)		Surface Soil Cr	acks (B6)						
Surface Water (A1)	True Aquatic Plants	(B14)	Sparsely Vegetated Concave Surface (B8)							
High Water Table (A2)	Hydrogen Sulfide Oc	dor (C1) res on Living Roots (C3)	Drainage Patterns (B10)							
Saturation (A3)	Moss Trim Lines (B16)									
Water Marks (B1)	Presence of Reduce	d Iron (C4) on in Tilled Soils (C6)	Dry-Season Water Table (C2)							
Sediment Deposits (B2)	Crayfish Burrows (C8)									
Drift Deposits (B3)	Saturation Visible on Aerial Imagery (C9)									
Algal Mat or Crust (B4)	marks)	Stunted or Stressed Plants (D1) Geomorphic Position (D2)								
Iron Deposits (B5)	7\									
Inundation Visible on Aerial Imagery (B7	<b>')</b>		Shallow Aquitar							
Water-Stained Leaves (B9)Microtopographic Relief (D4)  Aquatic Fauna (B13) FAC-Neutral Test (D5)										
			I AC-Neuliai 16	551 (DO)						
Field Observations:	No V Donth (inch									
Surface Water Present? Yes Water Table Present? Yes										
Saturation Present? Yes	No X Depth (inch		Hydrology Present?	Yes	No X					
(includes capillary fringe)	No X Deptil (iller	vettand	riyarology i resent:	103	_ NO _ X					
Describe Recorded Data (stream gauge, mo	onitoring well, aerial photos	, previous inspections), if ava	ailable:							
Remarks: Indicators of wetland hydrology are not pres	ent.									

VEGETATION (Four Strata) - Use scientific names of plants. Sampling Point: TP-2 Absolute Indicator Tree Stratum (Plot size: 30 % Cover Species? Status **Dominance Test worksheet:** FAC 1. Quercus phellos 40 Yes **Number of Dominant Species** 2. Liquidambar styraciflua 40 Yes FAC That Are OBL, FACW, or FAC: 6 (A) 3. Ulmus alata 20 Yes **FACU** Total Number of Dominant 4. Species Across All Strata: 9 (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 66.7% (A/B) Prevalence Index worksheet: 100 =Total Cover Total % Cover of: Multiply by: 50% of total cover: 20% of total cover: 20 **OBL** species x 1 = Sapling/Shrub Stratum (Plot size: 15 **FACW** species x 2 = Acer rubrum FAC **FAC** species x 3 = x 4 = 2. Liquidambar styraciflua **FAC FACU** species 3. **UPL** species 4. Column Totals: 5. Prevalence Index = B/A = **Hydrophytic Vegetation Indicators:** 6. 7. 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 8. 9 3 - Prevalence Index is ≤3.01 4 - Morphological Adaptations<sup>1</sup> (Provide supporting 15 =Total Cover data in Remarks or on a separate sheet) 50% of total cover: 8 20% of total cover: 3 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain) Herb Stratum (Plot size: FAC 1. Microstegium vimineum Yes <sup>1</sup>Indicators of hydric soil and wetland hydrology must be 10 **FACU** present, unless disturbed or problematic. 2. Potentilla indica Yes 3. Dichanthelium clandestinum 5 No **FAC Definitions of Four Vegetation Strata:** 4. Toxicodendron radicans 3 No FAC Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of 5. heiaht. 6. 7. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 8. 9. 10 Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 38 =Total Cover Woody Vine - All woody vines greater than 3.28 ft in height. 20% of total cover: 50% of total cover: 19 30 Woody Vine Stratum (Plot size: 1. Lonicera japonica Yes **FACU** 2. Toxicodendron radicans Yes 3. 4. Hydrophytic =Total Cover Vegetation Present? 50% of total cover: 20% of total cover: Yes X No Remarks: (Include photo numbers here or on a separate sheet.) 66.7% of dominant vegetation is FAC or wetter.

SOIL Sampling Point: TP-2 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features (inches) Color (moist) % Color (moist) Loc<sup>2</sup> % Type<sup>1</sup> Texture Remarks 0-20 7.5YR 3/4 100 Loamy/Clayey <sup>2</sup>Location: PL=Pore Lining, M=Matrix. <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. **Hydric Soil Indicators:** Indicators for Problematic Hydric Soils<sup>3</sup>: Histosol (A1) Polyvalue Below Surface (S8) (MLRA 147, 148) 2 cm Muck (A10) (MLRA 147) Histic Epipedon (A2) Thin Dark Surface (S9) (MLRA 147, 148) Coast Prairie Redox (A16) Black Histic (A3) Loamy Mucky Mineral (F1) (MLRA 136) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Red Parent Material (F21) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) (outside MLRA 127, 147, 148) Thick Dark Surface (A12) Redox Depressions (F8) Very Shallow Dark Surface (F22) Sandy Mucky Mineral (S1) Iron-Manganese Masses (F12) (LRR N, Other (Explain in Remarks) Sandy Gleyed Matrix (S4) MLRA 136) Sandy Redox (S5) Umbric Surface (F13) (MLRA 122, 136) <sup>3</sup>Indicators of hydrophytic vegetation and Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, Dark Surface (S7) Red Parent Material (F21) (MLRA 127, 147, 148) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): **Hydric Soil Present?** Yes No Remarks: This data form is revised from Eastern Mountains and Piedmont Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 8.0, 2016. Indicators of hydric soils are not present.

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Mulberry Road (TCD.007)	City/County: Harrisburg Sampling Date: 10-11-22							
Applicant/Owner: Trammel Crow Compar								
Investigator(s): DWM	Section, Township, Range: Cabarrus							
Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 3								
Subregion (LRR or MLRA): LRR P, MLRA 13	6 Lat: 35.330134 Long: -80.610907 Datum: NAD83							
Soil Map Unit Name: Pacolet sandy loam, 25	to 45 percent slopes (PaF)  NWI classification: none							
Are climatic / hydrologic conditions on the site	typical for this time of year? Yes X No (If no, explain in Remarks.)							
Are Vegetation, Soil, or Hydrole	ogy significantly disturbed? Are "Normal Circumstances" present? Yes X No							
Are Vegetation, Soil, or Hydrole								
<del></del>	site map showing sampling point locations, transects, important features, etc.							
Hydric Soil Present?	Yes X No         Is the Sampled Area           Yes X No         within a Wetland?         Yes X No							
Remarks:	<u> </u>							
Data point is representative of jurisdictional w	etland areas 'B' and 'C'							
HYDROLOGY								
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)							
Primary Indicators (minimum of one is required X Surface Water (A1)	d; check all that apply)  True Aquatic Plants (B14)  Surface Soil Cracks (B6)  Sparsely Vegetated Concave Surface (B8)							
X High Water Table (A2)	Hydrogen Sulfide Odor (C1)  X Drainage Patterns (B10)							
X Saturation (A3)	X Oxidized Rhizospheres on Living Roots (C3)  Moss Trim Lines (B16)							
X Water Marks (B1)	Presence of Reduced Iron (C4)  Dry-Season Water Table (C2)							
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)  X Crayfish Burrows (C8)							
Drift Deposits (B3)	Thin Muck Surface (C7)  Saturation Visible on Aerial Imagery (C9)							
Algal Mat or Crust (B4)	Other (Explain in Remarks)  Stunted or Stressed Plants (D1)							
Iron Deposits (B5)	X Geomorphic Position (D2)							
Inundation Visible on Aerial Imagery (B7)  Shallow Aquitard (D3)								
X Water-Stained Leaves (B9)	Microtopographic Relief (D4)							
Aquatic Fauna (B13)	FAC-Neutral Test (D5)							
Field Observations:								
Surface Water Present? Yes X	No Depth (inches):1							
Water Table Present? Yes X	No Depth (inches): 0							
Saturation Present? Yes X	No Depth (inches): Wetland Hydrology Present? Yes X No							
(includes capillary fringe)	Variance III and a label and a service of the servi							
Describe Recorded Data (stream gauge, moi	itoring well, aerial photos, previous inspections), if available:							
Remarks: Indicators of wetland hydrology are present.								
indicators of worlding riyarology are process.								

**VEGETATION** (Four Strata) – Use scientific names of plants. Sampling Point: TP-3 Absolute Dominant Indicator 30 \_\_\_) % Cover Species? Tree Stratum (Plot size: Status **Dominance Test worksheet:** 1. Acer negundo 30 Yes FAC **Number of Dominant Species** 2. Nyssa sylvatica 5 No FAC That Are OBL, FACW, or FAC: (A) 3. **Total Number of Dominant** 4. Species Across All Strata: 6 (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 66.7% (A/B) 7. Prevalence Index worksheet: Total % Cover of: 35 =Total Cover 20% of total cover: x 1 = 50% of total cover: 18 OBL species **FACW** species x 2 = Sapling/Shrub Stratum (Plot size: 1. Aesculus sylvatica FAC FAC species x 3 = 2. Juniperus virginiana Yes **FACU FACU** species x 4 = 3. UPL species x 5 = Column Totals: (A) 4. (B) 5. Prevalence Index = B/A = 6. **Hydrophytic Vegetation Indicators:** 7. 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 8. 3 - Prevalence Index is ≤3.0<sup>1</sup> 9. 4 - Morphological Adaptations<sup>1</sup> (Provide supporting 15 =Total Cover data in Remarks or on a separate sheet) 50% of total cover: 8 20% of total cover: Herb Stratum (Plot size: 5 ) Problematic Hydrophytic Vegetation<sup>1</sup> (Explain) Scirpus atrovirens OBL 1. 60 Yes <sup>1</sup>Indicators of hydric soil and wetland hydrology must be 25 2. Microstegium vimineum Yes FAC present, unless disturbed or problematic. 20 3. Juncus effusus No **FACW Definitions of Four Vegetation Strata:** 5 4. Boehmeria cylindrica **FACW** Nο Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or 5 more in diameter at breast height (DBH), regardless of 5. Rosa multiflora No **FACU** height. 6. 7. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft 8. (1 m) tall. 9. 10. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 115 =Total Cover Woody Vine - All woody vines greater than 3.28 ft in 58 50% of total cover: 20% of total cover: Woody Vine Stratum (Plot size: 30 ) 1. Lonicera japonica 2. 3. 4. Hydrophytic 5 =Total Cover Vegetation 50% of total cover: 20% of total cover: Present? Yes X No Remarks: (Include photo numbers here or on a separate sheet.) 66.7% of dominant vegetation is FAC or wetter.

SOIL Sampling Point: TP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth Matrix Redox Features										
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
0-4	10YR 5/2	90	10YR 5/6	10	С	PL/M	Loamy/Clayey	Prominent redox concentrations		
4-18	10YR 5/2	85	10YR 5/8	15	С	М	Loamy/Clayey	Prominent redox concentrations		
		<del></del> -								
					· <u></u>					
					-					
	oncentration, D=Deple	etion, RM	=Reduced Matrix, N	1S=Mas	ked Sand	l Grains.		: PL=Pore Lining, M=Matrix.		
Hydric Soil I								eators for Problematic Hydric Soils <sup>3</sup> :		
Histosol			Polyvalue Be			-		2 cm Muck (A10) (MLRA 147)		
	pipedon (A2)		Thin Dark Su					Coast Prairie Redox (A16)		
Black His			Loamy Muck	•		ILRA 130	•	(MLRA 147, 148)		
	n Sulfide (A4)		Loamy Gleye				<u>—</u> '	Piedmont Floodplain Soils (F19)		
	l Layers (A5) ck (A10) <b>(LRR N)</b>		X Depleted Ma Redox Dark	, ,			ı	(MLRA 136, 147) Red Parent Material (F21)		
	Below Dark Surface	(A11)	Depleted Da		` '		—'	(outside MLRA 127, 147, 148)		
	rk Surface (A12)	(, , , ,	Redox Depre				,	/ery Shallow Dark Surface (F22)		
	lucky Mineral (S1)		Iron-Mangan			2) (LRR I		Other (Explain in Remarks)		
	leyed Matrix (S4)		MLRA 136		`	, ,	<u> </u>	,		
	edox (S5)		Umbric Surfa	ace (F13	) (MLRA	122, 130	3Indio	cators of hydrophytic vegetation and		
Stripped	Matrix (S6)		Piedmont Flo	oodplain	Soils (F	19) <b>(MLR</b>	A 148)	vetland hydrology must be present,		
Dark Sur	face (S7)		Red Parent I	Material	(F21) <b>(M</b>	LRA 127	', 147, 148) unless disturbed or problematic.			
Restrictive L	ayer (if observed):									
Type:										
Depth (ir	nches):						Hydric Soil Prese	ent? Yes X No No		
Soils, Version			ntains and Piedmoi	nt Regio	nal Supp	lement V	ersion 2.0 to include	the NRCS Field Indicators of Hydric		

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Mulberry Road (TCD.007)		City/County: Harrisburg Sampling Date: 10/11/22								
Applicant/Owner: Trammel Crow Company	y		State:	NC S	Sampling Point:	TP-4				
Investigator(s): DWM	· · · · · · · · · · · · · · · · · · ·									
Landform (hillside, terrace, etc.): hillside	Lo	cal relief (concave,	convex, none): none		Slope (%):	4				
Subregion (LRR or MLRA): LRR P, MLRA 13	6 Lat: 35.330863		Long: -80.609592		Datum:	NAD83				
Soil Map Unit Name: Mecklenburg fine sandy		B)	NWI c	lassification	n: none					
Are climatic / hydrologic conditions on the site t	•	•			olain in Remarks	S.)				
Are Vegetation, Soil, or Hydrold			Normal Circumstances" p		Yes X	•				
Are Vegetation, Soil, or Hydrold	ogynaturally probl	ematic? (If ne	eded, explain any answe	rs in Rema	rks.)					
SUMMARY OF FINDINGS – Attach	site map showing s	sampling point	locations, transec	ts, impo	rtant featur	es, etc.				
Hydric Soil Present?	Yes X No Yes No X No X	Is the Sampled within a Wetland			No X					
Remarks: Data point is representative of a non-jurisdiction	onal upland area near juri	sdictional wetland a	ırea 'B'							
HYDROLOGY										
Wetland Hydrology Indicators:			Secondary Ind	icators (mi	nimum of two re	equired)				
Primary Indicators (minimum of one is required	d; check all that apply)		Surface S	Surface Soil Cracks (B6)						
Surface Water (A1)	True Aquatic Plants			Sparsely Vegetated Concave Surface (B8)						
High Water Table (A2)	Hydrogen Sulfide Od			Drainage Patterns (B10)  Moss Trim Lines (B16)						
· · · · · · · · · · · · · · · · · · ·	Saturation (A3) — Oxidized Rhizospheres on Living Roots (C3) Water Marks (B1) — Presence of Reduced Iron (C4)									
Water Marks (B1)		Dry-Season Water Table (C2)								
Sediment Deposits (B2)		Crayfish Burrows (C8)								
Drift Deposits (B3)		Saturation Visible on Aerial Imagery (C9)								
Algal Mat or Crust (B4)		Stunted or Stressed Plants (D1) Geomorphic Position (D2)								
Iron Deposits (B5)  Geomorphic Position (D2)										
Inundation Visible on Aerial Imagery (B7)  Shallow Aquitard (D3)										
Water-Stained Leaves (B9) Aquatic Fauna (B13)		Microtopographic Relief (D4)  X FAC-Neutral Test (D5)								
<del></del>			X FAC-Neut	iai resi (Di	5)					
Field Observations:										
	No X Depth (inch	· — —								
	No X Depth (inch									
	No X Depth (inch	ies): \ \	Wetland Hydrology Pres	ent?	Yes	No X				
(includes capillary fringe)  Describe Recorded Data (stream gauge, moni	toring well porial photos	provious inspection	na) if available:							
Describe Necorded Data (Stream gauge, mon	toring well, aerial priotos,	, previous irispection	is), ii avaliable.							
Demonto										
Remarks: Indicators of wetland hydrology are not presen	nt .									
maioatoro di wettana nyarology are not presen	·									

VEGETATION (Four Strata) - Use scientific names of plants. Sampling Point: TP-4 Absolute Indicator Tree Stratum (Plot size: 30 % Cover Species? Status **Dominance Test worksheet:** FAC 1. Liquidambar styraciflua 30 Yes **Number of Dominant Species** 2. Acer rubrum 20 Yes FAC That Are OBL, FACW, or FAC: (A) 3. Platanus occidentalis 5 No **FACW** Total Number of Dominant 4. Species Across All Strata: 6 (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 83.3% (A/B) Prevalence Index worksheet: 55 =Total Cover Total % Cover of: Multiply by: 50% of total cover: 20% of total cover: 28 **OBL** species x 1 = Sapling/Shrub Stratum (Plot size: 15 **FACW** species x 2 = Fraxinus pennsylvanica **FACW FAC** species x 3 = x 4 = 2. Liquidambar styraciflua FAC **FACU** species 3. **UPL** species 4. Column Totals: 5. Prevalence Index = B/A = **Hydrophytic Vegetation Indicators:** 6. 7. 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 8. 9 3 - Prevalence Index is ≤3.01 4 - Morphological Adaptations<sup>1</sup> (Provide supporting 10 =Total Cover data in Remarks or on a separate sheet) 50% of total cover: 5 20% of total cover: Problematic Hydrophytic Vegetation<sup>1</sup> (Explain) Herb Stratum (Plot size: 5 ) 1. <sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 2. 3. **Definitions of Four Vegetation Strata:** 4. Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of 5. height. 6. 7. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 8. 9. 10 Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. =Total Cover Woody Vine - All woody vines greater than 3.28 ft in height. 50% of total cover: 20% of total cover: Woody Vine Stratum (Plot size: 30 1. Lonicera japonica **FACU** 2. Smilax rotundifolia 3. 4. Hydrophytic =Total Cover Vegetation Present? 50% of total cover: 20% of total cover: Yes X No Remarks: (Include photo numbers here or on a separate sheet.) 83.3% of dominant vegetation is FAC or wetter.

SOIL Sampling Point: TP-4 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features (inches) Color (moist) % Color (moist) Loc<sup>2</sup> % Type<sup>1</sup> Texture Remarks 0-3 7.5YR 3/3 100 Loamy/Clayey 3-20 7.5YR 3/4 100 Loamy/Clayey <sup>2</sup>Location: PL=Pore Lining, M=Matrix. <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. **Hydric Soil Indicators:** Indicators for Problematic Hydric Soils<sup>3</sup>: Histosol (A1) Polyvalue Below Surface (S8) (MLRA 147, 148) 2 cm Muck (A10) (MLRA 147) Histic Epipedon (A2) Thin Dark Surface (S9) (MLRA 147, 148) Coast Prairie Redox (A16) Black Histic (A3) Loamy Mucky Mineral (F1) (MLRA 136) (MLRA 147, 148) Piedmont Floodplain Soils (F19) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Red Parent Material (F21) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) (outside MLRA 127, 147, 148) Thick Dark Surface (A12) Redox Depressions (F8) Very Shallow Dark Surface (F22) Sandy Mucky Mineral (S1) Iron-Manganese Masses (F12) (LRR N, Other (Explain in Remarks) Sandy Gleyed Matrix (S4) MLRA 136) Sandy Redox (S5) Umbric Surface (F13) (MLRA 122, 136) <sup>3</sup>Indicators of hydrophytic vegetation and Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, Dark Surface (S7) Red Parent Material (F21) (MLRA 127, 147, 148) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): **Hydric Soil Present?** Yes No Remarks: This data form is revised from Eastern Mountains and Piedmont Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 8.0, 2016. Indicators of hydric soils are not present.

Project/Site: Mulberry Road (TCD.007)	City/County: Harrisburg Sampling Date: 10-12-22							
Applicant/Owner: Trammel Crow Compar	State: NC Sampling Point: TP-5							
Investigator(s): DWM Section, Township, Range: Cabarrus								
Landform (hillside, terrace, etc.): swale	Local relief (concave, convex, none): concave Slope (%): 2							
Subregion (LRR or MLRA): LRR P, MLRA 13	6 Lat: 35.325799 Long: -80.610205 Datum: NAD83							
Soil Map Unit Name: Chewacla and Wehadk	ee soils, 0 to 2 percent slopes, frequently flooded (ChA) NWI classification: none							
Are climatic / hydrologic conditions on the site								
Are Vegetation, Soil, or Hydrol	<del></del>							
Are Vegetation, Soil, or Hydrol								
<del></del>	site map showing sampling point locations, transects, important features, etc							
Hydric Soil Present?	Yes X No         Is the Sampled Area           Yes X No         within a Wetland?         Yes X No							
Remarks:	<u> </u>							
Data point is representative of jurisdictional w	etland areas 'D' and 'E'							
   HYDROLOGY								
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)							
Primary Indicators (minimum of one is require	d; check all that apply)  Surface Soil Cracks (B6)							
Surface Water (A1)	True Aquatic Plants (B14)  X Sparsely Vegetated Concave Surface (B8)							
High Water Table (A2)	Hydrogen Sulfide Odor (C1)  X Drainage Patterns (B10)							
X Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16)							
— Water Marks (B1)	Presence of Reduced Iron (C4) Dry-Season Water Table (C2)							
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)  Crayfish Burrows (C8)							
Drift Deposits (B3)	Thin Muck Surface (C7)  Saturation Visible on Aerial Imagery (C9)							
Algal Mat or Crust (B4)	Other (Explain in Remarks)  Stunted or Stressed Plants (D1)							
Iron Deposits (B5)	Geomorphic Position (D2)							
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)  Migrator agraphic Relief (D4)							
Water-Stained Leaves (B9)	Microtopographic Relief (D4) FAC-Neutral Test (D5)							
Aquatic Fauna (B13)	FAC-Neutral Test (D5)							
Field Observations:								
Surface Water Present? Yes  Water Table Present? Yes	No X Depth (inches):							
Water Table Present? Yes Saturation Present? Yes X	<del></del>							
(includes capillary fringe)	No Depth (inches): 4 Wetland Hydrology Present? Yes X No							
	itoring well, aerial photos, previous inspections), if available:							
Remarks: Indicators of wetland hydrology are present.								

**VEGETATION** (Four Strata) – Use scientific names of plants. Sampling Point: TP-5 Absolute Dominant Indicator Tree Stratum (Plot size: 30 ) % Cover Species? Status **Dominance Test worksheet:** 1. **Number of Dominant Species** 2. That Are OBL, FACW, or FAC: (A) 3. **Total Number of Dominant** Species Across All Strata: 4. (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 75.0% (A/B) Prevalence Index worksheet: Total % Cover of: =Total Cover 20% of total cover: 50% of total cover: **OBL** species x 1 = \_\_\_\_ Sapling/Shrub Stratum (Plot size: 15 **FACW** species x 2 = x 3 = 1. Fraxinus pennsylvanica FACU FAC species Acer negundo **FACU** species 2. x 4 = x 5 = 3. UPL species Column Totals: (A) (B) 4. 5. Prevalence Index = B/A = 6. **Hydrophytic Vegetation Indicators:** 7. 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 8. 3 - Prevalence Index is ≤3.01 9. 4 - Morphological Adaptations<sup>1</sup> (Provide supporting 10 =Total Cover data in Remarks or on a separate sheet) 50% of total cover: \_\_\_ 5 20% of total cover: Herb Stratum (Plot size: Problematic Hydrophytic Vegetation<sup>1</sup> (Explain) Cryptotaenia canadensis FAC 1. 10 <sup>1</sup>Indicators of hydric soil and wetland hydrology must be Persicaria pensylvanica 2. **FACW** present, unless disturbed or problematic. 3. **Definitions of Four Vegetation Strata:** 4. Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of 5. height. 6. 7. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft 8. (1 m) tall. 9. 10. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 15 =Total Cover Woody Vine - All woody vines greater than 3.28 ft in 50% of total cover: 8 20% of total cover: Woody Vine Stratum (Plot size: 30 ) 1. Smilax rotundifolia 2. 3. 4. Hydrophytic 3 =Total Cover Vegetation 50% of total cover: 20% of total cover: Present? Yes X No Remarks: (Include photo numbers here or on a separate sheet.) 75.0% of dominant vegetation is FAC or wetter.

SOIL Sampling Point: TP-5

Profile Desc	ription: (Describe t	o the dep	th needed to docu	ıment t	he indica	tor or co	onfirm the absend	ce of indic	ators.)		
Depth	Matrix		Redox	k Featur	es						
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remark	s	
0-12	10YR 5/2	95	10YR 5/4	5	С	PL/M	Loamy/Clayey	Di	Distinct redox concentration		
12-20	10YR 5/3	100					Loamy/Clayey				
							-	_			
								_			
								_			
<sup>1</sup> Type: C=Co	oncentration, D=Deple	etion, RM	=Reduced Matrix, M	IS=Mas	ked Sand	Grains.	<sup>2</sup> Locat	ion: PL=P	ore Lining, M=N	latrix.	
Hydric Soil I									or Problematic	_	
Histosol	(A1)		Polyvalue Be	low Sur	rface (S8)	(MLRA	147, 148)	2 cm Mu	ıck (A10) <b>(MLR</b>	A 147)	
Histic Ep	pipedon (A2)		Thin Dark Su	ırface (S	89) <b>(MLR</b>	A 147, 1	48)	Coast P	rairie Redox (A1	6)	
Black His	stic (A3)		Loamy Muck	y Miner	al (F1) <b>(N</b>	ILRA 136	<u> </u>	(MLR	A 147, 148)		
Hydroge	n Sulfide (A4)		Loamy Gleye	ed Matri	x (F2)		<u></u>	Piedmor	nt Floodplain So	ils (F19)	
Stratified	l Layers (A5)		X Depleted Ma	trix (F3)	1			(MLR	A 136, 147)		
2 cm Mu	ck (A10) (LRR N)		Redox Dark	Surface	(F6)			Red Par	ent Material (F2	1)	
Depleted	d Below Dark Surface	(A11)	Depleted Da	rk Surfa	ce (F7)			(outsi	de MLRA 127, 1	47, 148)	
Thick Da	ark Surface (A12)		Redox Depre	essions	(F8)		_	Very Sha	allow Dark Surfa	ice (F22)	
Sandy M	lucky Mineral (S1)		Iron-Mangan	ese Ma	sses (F12	2) <b>(LRR N</b>	N,	Other (E	xplain in Remar	ks)	
Sandy G	leyed Matrix (S4)		MLRA 136	<b>i)</b>							
Sandy R	edox (S5)		Umbric Surfa				-		f hydrophytic ve	_	
Stripped	Matrix (S6)		Piedmont Flo								
Dark Sur	rface (S7)		Red Parent N	Material	(F21) <b>(M</b>	LRA 127	, 147, 148)	unless d	listurbed or prob	lematic.	
Restrictive L	_ayer (if observed):										
Type:											
Depth (ir	nches):						Hydric Soil Pre	esent?	Yes X	No	
Soils, Version	m is revised from Eas n 8.0, 2016. hydric soils are prese		ntains and Piedmor	nt Regio	nal Supp	lement V	ersion 2.0 to includ	de the NRO	CS Field Indicato	ors of Hydric	

Project/Site: Mulberry Road (TCD.007)	City/County:	Harrisburg	Sampling Date: 10-12-22				
Applicant/Owner: Trammel Crow Compar	ny	State: NC	Sampling Point: TP-6				
Investigator(s): DWM	Section, Townsh	nip, Range: Cabarrus					
Landform (hillside, terrace, etc.): terrace		e, convex, none): none	Slope (%): 0				
Subregion (LRR or MLRA): LRR P, MLRA 13	Long: -80.609536	Datum: NAD83					
Soil Map Unit Name: Pacolet sandy loam, 25		NWI classifica					
· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·						
Are climatic / hydrologic conditions on the site  Are Vegetation, Soil, or Hydrol	•	'es X No (If no, e "Normal Circumstances" present?	explain in Remarks.) Yes X No				
Are Vegetation, Soil, or Hydrol	ogynaturally problematic? (If r	needed, explain any answers in Re	marks.)				
SUMMARY OF FINDINGS – Attach		nt locations, transects, im	portant features, etc.				
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes         No         X         Is the Sample within a Wetla           Yes         No         X         within a Wetla		No X				
Remarks: Data point is representative of a non-jurisdicti	onal upland area near jurisdictional wetland	l area 'E'					
HYDROLOGY							
Wetland Hydrology Indicators:		Secondary Indicators	(minimum of two required)				
Primary Indicators (minimum of one is require	ed; check all that apply)	Surface Soil Crac	<u> </u>				
Surface Water (A1)	True Aquatic Plants (B14)		Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2)	Hydrogen Sulfide Odor (C1)		Drainage Patterns (B10)				
Saturation (A3)	Oxidized Rhizospheres on Living Root	ts (C3) Moss Trim Lines (	Moss Trim Lines (B16)				
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season Wate	Dry-Season Water Table (C2)				
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (	C6) Crayfish Burrows	Crayfish Burrows (C8)				
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Visible	Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stress	Stunted or Stressed Plants (D1)				
Iron Deposits (B5)		Geomorphic Posit	Geomorphic Position (D2)				
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard	(D3)				
Water-Stained Leaves (B9)		Microtopographic	Relief (D4)				
Aquatic Fauna (B13)		FAC-Neutral Test	(D5)				
Field Observations:							
Surface Water Present? Yes	No X Depth (inches):						
Water Table Present? Yes	No X Depth (inches):						
Saturation Present? Yes	No X Depth (inches):	Wetland Hydrology Present?	Yes No _X				
(includes capillary fringe)	<u></u>						
Describe Recorded Data (stream gauge, mor	itoring well, aerial photos, previous inspecti	ions), if available:					
Remarks:							
Indicators of wetland hydrology are not prese	nt.						
, ,,							

		Absolute	Dominant	Indicator				
Tree Stratum (Plot size:30)	_	% Cover	Species?	Status	Dominance Test worksheet:			
1. Acer negundo		30	Yes	FAC	Number of Dominant Species			
2. Liquidambar styraciflua		25	Yes	FAC	That Are OBL, FACW, or FAC:	4 (A)		
3. Platanus occidentalis 4.		5	No	FACW	Total Number of Dominant Species Across All Strata:	8 (B)		
5. 6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 50	).0% (A/B		
7.					Prevalence Index worksheet:	· `		
		60 :	=Total Cover		Total % Cover of: Multi	iply by:		
50% of total cover:	30	20%	of total cover:	12	OBL species x 1 =			
Sapling/Shrub Stratum (Plot size: 15	)				FACW species x 2 =			
. Ligustrum sinense		10	Yes	FACU	FAC species x 3 =			
					FACU species x 4 =			
					UPL species x 5 =			
					Column Totals: (A)	(E		
					Prevalence Index = B/A =			
					Hydrophytic Vegetation Indicators:			
					1 - Rapid Test for Hydrophytic Veget	tation		
					2 - Dominance Test is >50%	lation		
· .								
·			<del></del>		3 - Prevalence Index is ≤3.0¹	.:		
	10		=Total Cover	_	4 - Morphological Adaptations <sup>1</sup> (Provide suppor data in Remarks or on a separate sheet)			
50% of total cover:	5	20%	of total cover:	2	·	,		
lerb Stratum (Plot size: 5 )					Problematic Hydrophytic Vegetation	' (Explain)		
. Lonicera japonica		10	Yes	FACU	<sup>1</sup> Indicators of hydric soil and wetland hyd			
. Elephantopus tomentosus		5	Yes	UPL	present, unless disturbed or problematic.			
. Viola sororia		5	Yes	FAC	Definitions of Four Vegetation Strata:			
					Tree - Woody plants, excluding vines, 3			
·					more in diameter at breast height (DBH), height.	, regardless o		
•					Sapling/Shrub – Woody plants, excluding	ng vines, less		
					than 3 in. DBH and greater than or equal	I to 3.28 ft		
					m) tall.			
0.					Herb – All herbaceous (non-woody) plan	nts, regardless		
1.					of size, and woody plants less than 3.28			
		20 :	=Total Cover		Woody Vine – All woody vines greater the	han 3.28 ft in		
50% of total cover:	10		of total cover:	4	height.			
Voody Vine Stratum (Plot size: 30	1		or total cover.		-			
. Lonicera japonica	.,	5	Yes	FACU				
		5	Yes	FAC				
		<u> </u>	162	FAC				
·								
i					Hydrophytic			
	_		=Total Cover		Vegetation			
	5	20%	of total cover:	2	Present? Yes No X			

SOIL Sampling Point: TP-6 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Matrix Redox Features (inches) Color (moist) % Color (moist) Loc<sup>2</sup> % Type<sup>1</sup> Texture Remarks 0-3 7.5YR 3/3 100 Loamy/Clayey 3-20 7.5YR 3/4 100 Loamy/Clayey <sup>2</sup>Location: PL=Pore Lining, M=Matrix. <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. **Hydric Soil Indicators:** Indicators for Problematic Hydric Soils<sup>3</sup>: Histosol (A1) Polyvalue Below Surface (S8) (MLRA 147, 148) 2 cm Muck (A10) (MLRA 147) Histic Epipedon (A2) Thin Dark Surface (S9) (MLRA 147, 148) Coast Prairie Redox (A16) Black Histic (A3) Loamy Mucky Mineral (F1) (MLRA 136) (MLRA 147, 148) Piedmont Floodplain Soils (F19) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Red Parent Material (F21) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) (outside MLRA 127, 147, 148) Thick Dark Surface (A12) Redox Depressions (F8) Very Shallow Dark Surface (F22) Sandy Mucky Mineral (S1) Iron-Manganese Masses (F12) (LRR N, Other (Explain in Remarks) Sandy Gleyed Matrix (S4) MLRA 136) Sandy Redox (S5) Umbric Surface (F13) (MLRA 122, 136) <sup>3</sup>Indicators of hydrophytic vegetation and Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, Dark Surface (S7) Red Parent Material (F21) (MLRA 127, 147, 148) unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): **Hydric Soil Present?** Yes No Remarks: This data form is revised from Eastern Mountains and Piedmont Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 8.0, 2016. Indicators of hydric soils are not present.

Project/Site: Mulberry Road (TCD.007)		City/County: Harrisburg	]	Sampling Date: 10-11-22			
Applicant/Owner: Trammel Crow Company	y		State: NC	Sampling Point: TP-7			
Investigator(s): JKM		Section, Township, Range:	Cabarrus	-			
Landform (hillside, terrace, etc.): terrace	Loc	cal relief (concave, convex,	none): concave	Slope (%): 2			
Subregion (LRR or MLRA): LRR P, MLRA 13	6 Lat: 35.322819	Long: -	80.607428	Datum: NAD83			
Soil Map Unit Name: Chewacla and Wehadke	ee soils, 0 to 2 percent slop	pes, frequently flooded (ChA	A) NWI classificat	ion: None			
Are climatic / hydrologic conditions on the site t	vpical for this time of year'	? Yes X	No (If no, e	explain in Remarks.)			
Are Vegetation, Soil, or Hydrold			ircumstances" present?	•			
Are Vegetation, Soil, or Hydrold	· <del></del>		olain any answers in Rer	marks.)			
SUMMARY OF FINDINGS – Attach			ons, transects, imp	portant features, etc.			
Hydrophytic Vegetation Present?	Yes X No	Is the Sampled Area					
• • •	Yes X No	within a Wetland?	Yes_X_	No			
Wetland Hydrology Present?	Yes X No			<del></del>			
Remarks:  Data point is representative of jurisdictional we	etland area 'F'						
HYDROLOGY							
Wetland Hydrology Indicators:			Secondary Indicators (	minimum of two required)			
Primary Indicators (minimum of one is required	d; check all that apply)		Surface Soil Crack	(s (B6)			
Surface Water (A1)	True Aquatic Plants (E	314)	X Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2)	Hydrogen Sulfide Odd	or (C1)	X Drainage Patterns	(B10)			
Saturation (A3)	X Oxidized Rhizosphere	es on Living Roots (C3)	Moss Trim Lines (B16)				
Water Marks (B1)	Presence of Reduced	Iron (C4)	Dry-Season Water Table (C2)				
Sediment Deposits (B2)	Recent Iron Reduction	n in Tilled Soils (C6)	X Crayfish Burrows (C8)				
Drift Deposits (B3)	Thin Muck Surface (C		Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	Other (Explain in Rem	narks)	Stunted or Stressed Plants (D1)				
Iron Deposits (B5)			Geomorphic Positi	' '			
Inundation Visible on Aerial Imagery (B7)			Shallow Aquitard (				
X Water-Stained Leaves (B9)			Microtopographic F	` '			
Aquatic Fauna (B13)			X FAC-Neutral Test	(D5)			
Field Observations:							
Surface Water Present? Yes	No X Depth (inche	· <del></del>					
Water Table Present? Yes	No X Depth (inche						
Saturation Present? Yes	No X Depth (inche	es): Wetland I	Hydrology Present?	Yes <u>X</u> No			
(includes capillary fringe)	tarian wall annial abatan		.labla.				
Describe Recorded Data (stream gauge, moni	toring well, aerial photos, p	previous inspections), ir ava	liable:				
Devente							
Remarks: Indicators of wetland hydrology are present.							
indicators of wettand hydrology are present.							

VEGETATION (Four Strata) - Use scientific names of plants. Sampling Point: TP-7 Absolute Indicator Tree Stratum (Plot size: 30 ) % Cover Species? Status **Dominance Test worksheet:** FAC 1. Populus deltoides 60 Yes **Number of Dominant Species** 2. Acer rubrum 20 Yes FAC That Are OBL, FACW, or FAC: (A) 3. Platanus occidentalis 10 No **FACW Total Number of Dominant** 4. 10 No OBL Salix nigra Species Across All Strata: 4 (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 100.0% (A/B) Prevalence Index worksheet: 100 Total % Cover of: =Total Cover Multiply by: 50% of total cover: 20% of total cover: 20 **OBL** species x 1 = x 2 = \_\_\_\_ Sapling/Shrub Stratum (Plot size: 15 **FACW** species Salix nigra OBL **FAC** species x 3 = 2. Acer rubrum **FAC FACU** species x 4 = 3. **UPL** species 4. Column Totals: 5. Prevalence Index = B/A = **Hydrophytic Vegetation Indicators:** 6. 7. 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 8. 9 3 - Prevalence Index is ≤3.01 60 =Total Cover 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 50% of total cover: 30 20% of total cover: Problematic Hydrophytic Vegetation<sup>1</sup> (Explain) Herb Stratum (Plot size: 5 ) 1. <sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 2. 3. **Definitions of Four Vegetation Strata:** 4. Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of 5. heiaht. 6. 7. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 8. 9. 10. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. =Total Cover Woody Vine - All woody vines greater than 3.28 ft in height. 50% of total cover: 20% of total cover: Woody Vine Stratum (Plot size: 30 1. 2. 3. 4. Hydrophytic =Total Cover Vegetation Present? 50% of total cover: 20% of total cover: Yes X No Remarks: (Include photo numbers here or on a separate sheet.) 100.0% of dominant vegetation is FAC or wetter.

SOIL

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

Depth Matrix Redox Features

Depth	Matrix	·	Redo	x Featui	res				•	
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0-18	10YR 6/2	80	10YR 5/6	20	С	PL/M	Loamy/Claye	у Р	rominent redox concentrations	
							-			
1							2.	<del>_</del>		
Type: C=Co	oncentration, D=Deple	etion, RM	=Reduced Matrix, M	S=Mask	ed Sand	Grains.			Pore Lining, M=Matrix.  for Problematic Hydric Soils <sup>3</sup> :	
Histosol			Polyvalue Be	Jow Sur	face (S8	(MI DA 1			uck (A10) (MLRA 147)	
	pipedon (A2)		Thin Dark Su				-		Prairie Redox (A16)	
Black His			Loamy Muck				-		A 147, 148)	
	n Sulfide (A4)		Loamy Gleye			ILIXA 100	,		nt Floodplain Soils (F19)	
	d Layers (A5)		X Depleted Ma				•		A 136, 147)	
	ick (A10) <b>(LRR N)</b>		Redox Dark						rent Material (F21)	
	d Below Dark Surface	(A11)	Depleted Da				•		ide MLRA 127, 147, 148)	
	ark Surface (A12)	( ,	Redox Depre						nallow Dark Surface (F22)	
	lucky Mineral (S1)			Iron-Manganese Masses (F12) (LRR N, Other (Explain in Remarks)						
Sandy G	leyed Matrix (S4)		MLRA 136	MLRA 136)						
Sandy R	edox (S5)		Umbric Surfa	ce (F13	B) (MLRA	122, 136	<sup>3</sup> Indicators of hydrophytic vegetation and			
Stripped	Matrix (S6)		Piedmont Flo	odplain	Soils (F	19) <b>(MLR</b>	A 148) wetland hydrology must be present,			
Dark Su	rface (S7)		Red Parent N	Red Parent Material (F21) (MLRA 127, 147, 148) unless disturbed or parent Material (F21) (MLRA 127, 147, 148)						
Restrictive I	Layer (if observed):									
Type:										
Depth (ir	nches):						Hydric Soil F	Present?	Yes X No	
Remarks:										
		stern Mou	ntains and Piedmont	Region	al Supple	ement Ver	sion 2.0 to includ	de the NRCS	S Field Indicators of Hydric Soils,	
Version 8.0,		.m.t								
indicators of	hydric soils are prese	erit.								

Project/Site: Mulberry Road (TCD.007)	City/County: Harrisburg	Sampling Date: 10-12-22				
Applicant/Owner: Trammel Crow Company		State: NC Sampling Point: TP-8				
Investigator(s): JKM	Section, Township, Range:	Cabarrus				
Landform (hillside, terrace, etc.): terrace	Local relief (concave, convex, r	none): none Slope (%): 2				
Subregion (LRR or MLRA): LRR P, MLRA 136 Lat:	 35.321789	0.606444 Datum: NAD83				
Soil Map Unit Name: Chewacla and Wehadkee soils, 0	to 2 percent slopes, frequently flooded (Ch	A) NWI classification: none				
Are climatic / hydrologic conditions on the site typical for	this time of year? Yes X	No (If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are "Normal Ci	rcumstances" present? Yes X No				
Are Vegetation, Soil, or Hydrology		lain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map		ons, transects, important features, etc.				
Hydrophytic Vegetation Present?         Yes X           Hydric Soil Present?         Yes           Wetland Hydrology Present?         Yes	No X Is the Sampled Area within a Wetland?	YesNo_X				
Remarks: Data point is representative of a non-jurisdictional uplar	d area near jurisdictional wetland area 'F'					
HYDROLOGY						
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one is required; check a	ıll that apply)	Surface Soil Cracks (B6)				
	Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2) Hydro	gen Sulfide Odor (C1)	Drainage Patterns (B10)				
Saturation (A3) Oxidiz	ed Rhizospheres on Living Roots (C3)	Moss Trim Lines (B16)				
Water Marks (B1) Preser	nce of Reduced Iron (C4)	Dry-Season Water Table (C2)				
Sediment Deposits (B2) Recer	t Iron Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)				
l <del></del>	fluck Surface (C7)	Saturation Visible on Aerial Imagery (C9)				
	(Explain in Remarks)	Stunted or Stressed Plants (D1)				
Iron Deposits (B5)		Geomorphic Position (D2)				
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)				
Water-Stained Leaves (B9)		Microtopographic Relief (D4)				
Aquatic Fauna (B13)		FAC-Neutral Test (D5)				
Field Observations:						
Surface Water Present?         Yes         No         X           Water Table Present?         Yes         No         X	Depth (inches):					
Water Table Present? Yes No X						
Saturation Present? Yes No X	Depth (inches): Wetland H	lydrology Present? Yes No _X				
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring wel	L cariel photos provious inspections) if av	oilable.				
Describe Recorded Data (Stream gauge, monitoring wer	, aeriai priotos, previous irispections), ii av	allable.				
Remarks:	_					
Indicators of wetland hydrology are not present.						
,						

**VEGETATION** (Four Strata) – Use scientific names of plants. Sampling Point: TP-8 Absolute Dominant Indicator 30 \_\_\_) % Cover Species? Tree Stratum (Plot size: Status **Dominance Test worksheet:** 1. Acer negundo 60 Yes FAC **Number of Dominant Species** 2. Celtis occidentalis 20 Yes **FACU** That Are OBL, FACW, or FAC: (A) 3. Ulmus alata 10 No **FACU Total Number of Dominant** 4. Species Across All Strata: 8 (B) 5. Percent of Dominant Species 6. That Are OBL, FACW, or FAC: 62.5% (A/B) 7. Prevalence Index worksheet: Total % Cover of: 90 =Total Cover 50% of total cover: 20% of total cover: OBL species x 1 = \_\_\_\_ Sapling/Shrub Stratum (Plot size: 15 **FACW** species x 2 = \_\_\_\_ 1. Fraxinus pennsylvanica 5 **FACW** FAC species x 3 = FACU species 2. x 4 = x 5 = 3. UPL species Column Totals: (A) 4. (B) 5. Prevalence Index = B/A = 6. **Hydrophytic Vegetation Indicators:** 7. 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 8. 3 - Prevalence Index is ≤3.0<sup>1</sup> 9. 4 - Morphological Adaptations<sup>1</sup> (Provide supporting 5 =Total Cover data in Remarks or on a separate sheet) 50% of total cover: 3 20% of total cover: Herb Stratum (Plot size: 5 ) Problematic Hydrophytic Vegetation<sup>1</sup> (Explain) Galium aparine **FACU** 1. 10 Yes <sup>1</sup>Indicators of hydric soil and wetland hydrology must be 5 2. Viola sororia Yes FAC present, unless disturbed or problematic. 5 3. Dichanthelium clandestinum Yes FAC **Definitions of Four Vegetation Strata:** 3 4. Toxicodendron radicans FAC Nο Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of 5. height. 6. 7. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft 8. (1 m) tall. 9. 10. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. 23 =Total Cover Woody Vine - All woody vines greater than 3.28 ft in 50% of total cover: 12 20% of total cover: Woody Vine Stratum (Plot size: 30 ) Lonicera japonica Yes **FACU** 2. Toxicodendron radicans 5 Yes FAC 3. 4. Hydrophytic 10 =Total Cover Vegetation 50% of total cover: 20% of total cover: Present? Yes X No Remarks: (Include photo numbers here or on a separate sheet.) 50.0% of dominant vegetation is FAC or wetter.

SOIL Sampling Point: TP-8

	ription: (Describe t	o the dep				tor or co	onfirm the abs	ence of indi	cators.)		
Depth	Matrix Calar (maint)	0/		k Featur		12	T-141		Dam		
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks		
0-3	7.5YR 3/3	100					Loamy/Clay	<u></u>			
3-20	7.5YR 3/4	100					Loamy/Clay	ey			
¹Type: C=Co	ncentration, D=Deple	etion, RM	=Reduced Matrix, N	 1S=Mas	ked Sand	Grains.	<sup>2</sup> Lo	cation: PL=F	Pore Lining, N	л=Matrix.	
Hydric Soil I		•	·							atic Hydric Soils <sup>3</sup> :	
Histosol	(A1)		Polyvalue Be	low Su	rface (S8)	(MLRA	147, 148)	2 cm M	uck (A10) <b>(M</b>	LRA 147)	
Histic Ep	pedon (A2)		Thin Dark Su	urface (S	9) <b>(MLR</b>	A 147, 14	<b>48</b> )	Coast F	Prairie Redox	(A16)	
Black His	tic (A3)		Loamy Muck	y Miner	al (F1) <b>(M</b>	LRA 136	5)	(MLR	A 147, 148)		
	Sulfide (A4)		Loamy Gleye						nt Floodplain	Soils (F19)	
	Layers (A5)		Depleted Ma					-	A 136, 147)		
	ck (A10) (LRR N)	(* 4 4)	Redox Dark		` '				rent Material		
	Below Dark Surface	(A11)	Depleted Da					-	i <b>de MLRA 12</b> nallow Dark S	-	
	rk Surface (A12) ucky Mineral (S1)		Redox Depre			\	ı			` '	
	eyed Matrix (S4)		Iron-Manganese Masses (F12) (LRR N,Other (Explain in Remarks) MLRA 136)							marks)	
Sandy Re				Umbric Surface (F13) (MLRA 122, 136)  3Indicators of hydrogen						vegetation and	
	Matrix (S6)		Piedmont Flo					wetland hydrology must be present,			
Dark Sur	face (S7)						127, 147, 148) unless disturbed or problemati				
Restrictive L	ayer (if observed):										
Type:											
Depth (in	ches):						Hydric Soil	Present?	Yes	No X	
Remarks:											
	n is revised from Eas	stern Mou	ntains and Piedmor	nt Regio	nal Supp	ement V	ersion 2.0 to in	clude the NR	CS Field Indi	cators of Hydric	
Soils, Versior Indicators of	i 8.0, 2016. nydric soils are not p	resent.									
a.oatoro or	.,										

Appendix C Site Photographs





Photograph 1: General view of SCA in the western portion of the Site



Photograph 2: General view of SCB in the western portion of the Site





Photograph 3: General view of SCC in the central portion of the Site



Photograph 4: General view of SCD in the central portion of the Site





Photograph 5: General view of SCE in the north-central portion of the Site



Photograph 6: General view of Rocky River in the southern portion of the Site





Photograph 7: General view of Wetland Area "A" in the western portion of the Site



Photograph 8: General view of Wetland Area "B" in the central portion of the Site





Photograph 9: General view of Wetland Area "C" in the north-central portion of the Site



Photograph 10: General view of Wetland Area "D" in the north-central portion of the Site





Photograph 11: General view of Wetland Area "E" in the east-central portion of the Site



Photograph 12: General view of Wetland Area "F" in the southeastern portion of the Site





Photograph 13: General view of Pond "A" in the north-central portion of the Site



Photograph 14: General view of upland area in the south-central portion of the Site





Photograph 15: Hydric soils observed in the central portion of the Site



Photograph 16: Upland soils observed throughout the Site

