

<u>Sent Via Email</u>

October 18, 2023

Epkon Hospitality

Attn: Mr. Patrick Parekh

Re: Preliminary Stream and Wetlands Survey Undeveloped Land 739 Hatley Road Pittsboro, North Carolina <u>H&H Job No. EPK-001</u>

Dear Patrick:

1.0 Introduction

Hart & Hickman, PC (H&H) is pleased to present this preliminary stream and wetlands survey for the property located at 739 Hatley Road in Pittsboro, Chatham County, North Carolina (Site or subject Site). The Site consists of one parcel (Chatham County Parcel ID Number 9772-00-79-6324) that comprises approximately 130 acres of land. The Site currently exists primarily as undeveloped land with an outbuilding associated with a former residential structure located in the southern portion of the Site.

H&H personnel visited the Site and conducted the preliminary stream and wetlands survey activities on September 12 through 15, 2023. 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 of 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 Farrington, North Carolina (2022) and Merry Oaks, North Carolina (2022) US Geological Survey (USGS) 7.5-minute topographic maps with coverage of the subject Site;
- reviewed the Chatham County Geographical Information System (GIS) Land Use & Planning Viewer website for the presence of hydrology on the subject Site (https://chathamncgis.maps.arcgis.com)
- 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 Chatham County (2006) 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).

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 Parkers Creek in the northern portion of the Site. The topographic gradient at the Site generally slopes toward Parkers Creek, which flows in easterly and southeasterly direction toward Jordan Lake located approximately 6,500 feet southeast of the Site.

Chatham County GIS

H&H reviewed the Chatham County GIS website to determine if surface water bodies and floodplains are depicted on the subject Site. The Chatham County GIS depicts Parkers Creek in the northern portion of the Site. The Chatham County GIS does not depict floodplains on the Site.

Chatham County regulates buffer zones along certain streams, wetlands, and ponds. The buffers consist of undisturbed vegetated zones to protect the natural function of an aquatic system. The buffers are applied to ephemeral, intermittent, and perennial streams, in-line ponds, and wetlands. According to the Chatham County GIS website, the Site falls within the Jordan Lake Watershed Protection District.

<u>NWI Map</u>

H&H reviewed the NWI map for potential jurisdictional wetlands and surface water features on the subject Site. The NWI map depicts a stream feature in the northern portion of the Site which is consistent with the location of Parkers Creek. NWI classifies this stream feature as R5UBH, which is defined as an unknown perennial riverine system with an unconsolidated bottom that is permanently flooded.

USDA NRCS Web Soil Survey

H&H reviewed web soil survey information and identified multiple soil series. The soil series identified on the Site are not typically considered hydric.



USDA SCS Published Soil Survey

H&H reviewed published soil survey information and identified multiple soil series. The soil series identified on the Site are not typically considered hydric. The published soil survey also depicts Parkers Creek, and two unnamed tributaries of Parkers Creek in the northern and central portions of the Site.

FEMA FIRM

H&H reviewed the FEMA FIRM panels on the FEMA website, which do not depict 100-year or 500-year floodplains on the Site.

2.2 Site-Specific Survey

On September 12 through 15, 2023, 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 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 delineated 29 potentially jurisdictional stream channels on the subject Site. The potentially jurisdictional streams observed on the Site is summarized in the table below:



Stream Channel ID	On-Site Location	Drainage Direction	Direction	
SCA	East-central	Northeast	Ephemeral	136
SCB	Southeast	North	Ephemeral	112
			Intermittent	1478
SCC	Central	Northeast	Intermittent	1005
			Perennial	1035
SCD	Southeast	North	Ephemeral	32
SCE	East-central	Northeast	Ephemeral	93
SCF	Central	Northeast	Ephemeral	47
SCG	South-central	North	Intermittent	215
SCH	Southwest	Northeast	Ephemeral	104
SCI	Southwest	Northeast	Ephemeral	86
SCJ	Southwest	East	Ephemeral	56
SCK	Southwest	East	Ephemeral	21
SCL	Southwest	East	Ephemeral	49
SCM	West	Northeast	Ephemeral	107
			Intermittent	332
SCN	West	East	Ephemeral	173
			Intermittent	645
SCO	North-central	East	Intermittent	698
			Perennial	1013
SCP	Northwest	East	Ephemeral	204
			Intermittent	239
SCQ	West	Southeast	Intermittent	82
SCR	West	Southeast	Perennial	465
SCS	Central	Northeast	Ephemeral	72
SCT	Central	Northeast	Ephemeral	188
SCU	Central	Northwest	Ephemeral	31

SCV	Central	Northeast	Ephemeral	24
SCW	Northwest	East	Perennial	134
SCX	North	Southeast	Perennial	2679
SCY	North-Central	Northeast	Ephemeral	220
SCZ	Northeast	Southwest	Intermittent	374
			Perennial	125
SCAA	Northeast	Southwest	Ephemeral	181
SCBB	North	South	Intermittent	323
SCCC	Northeast	East	Ephemeral	67

Notes:

1. SC = Stream Channel

2. Flow condition determined using DEQ DWR's Stream Identification Form (version 4.11)

Please note that ephemeral stream channels are not typically regulated by the Corps or the North Carolina DEQ DWR; therefore, ephemeral stream channels are not subject to Section 404/401 permitting requirements. However, ephemeral streams are subject to Chatham County Buffer requirements. 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 22 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. The potential jurisdictional wetland areas observed on the Site are summarized in the table below:



Wetland Area ID	On-Site Location	Drainage Direction	Approximate On- Site Area (sq-ft)
WAA	East	North	8850
WAB	Southeast	Northwest	5964
WAC	South	Northeast	543
WAD	North	Southeast	318
WAE	North	East	659
WAF	East	Northwest	3832
WAG	East	East	624
WAH	Central	South	1956
WAI	Central	Northeast	16195
WAJ	South-Central	North	5767
WAK	West	East	5922
WAL	West	Northeast	60
WAM	West	Northeast	1400
WAN	Central	East	182
WAO	West	East	7072
WAP	Northwest-Central	South	9403
WAQ	East	East	696
WAR	Northeast	Southwest	5949
WAS	Northeast	Southeast	334
WAT	Northeast	Southeast	2233
WAU	North	Southeast	3890
WAV	North-Central	Southeast	11054

Notes:

1. WA = Wetland Area

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 did not observe open waters on-Site during our survey.

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 and wetlands be verified by the Corps through a Preliminary Jurisdictional Determination (PJD) request. Only the Corps can determine if jurisdictional features exist. Please note that a recent Supreme Court ruling may affect the Corps' interpretation of jurisdictional features, and sizes and/or locations of features identified during the survey may be altered during a Site visit with the Corps. 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 and wetlands.

The Corps has published Nationwide Permits (NWPs) including NWP #29, which went into effect on March 15, 2021. The NWP #29 allows for cumulative impacts of 0.5 acre to both streams and wetlands for residential developments. In response to NWP #29, the North Carolina DEQ DWR has published a corresponding Water Quality Certificate (WQC) #4256, which also went into effect on March 15, 2021. According to the WQC #4256, 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, NWP #29 allows up to 0.5 acre of cumulative wetland, stream, and open water 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.



As noted above, Chatham County regulates environmental buffers as defined in Section 304 (D) of the Chatham County Watershed Protection Ordinance. The buffers are applied to ephemeral streams, intermittent streams, perennial streams, in-line ponds, and wetlands, and consist of vegetated buffers to protect the natural functions of a stream system.

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

Dan McCauley, PWS Sr. Project Environmental Scientist

Mas Bugo

Matt Hugo Staff Scientist

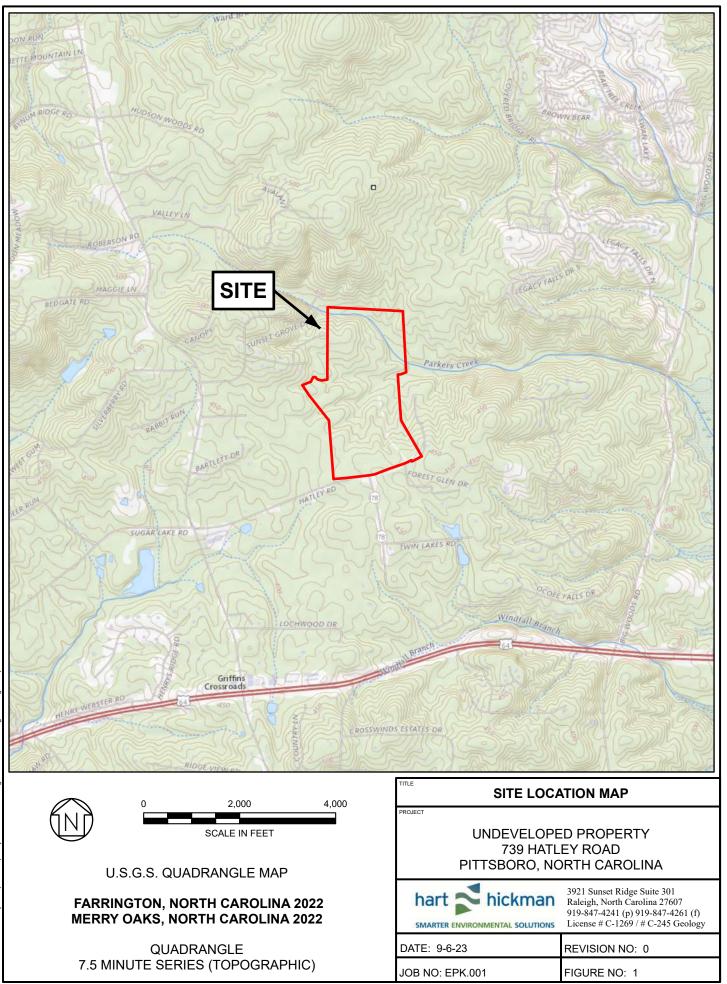
Attachments

Figure 1 – Site Location Map
Figure 2 – Preliminary Wetland Delineation Map
Appendix A – Support Documents: Chatham 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



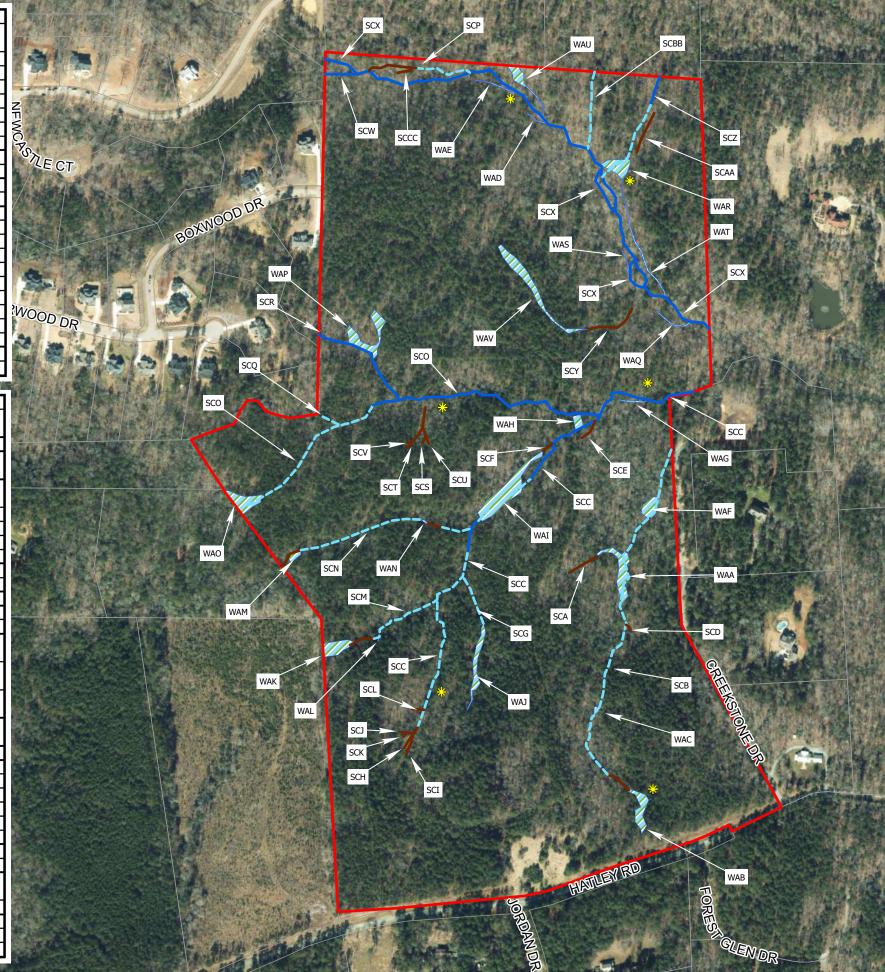
Figures



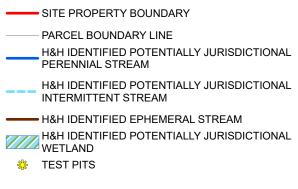


POTENTIAL JURISDICTION	
WETLAND AREA ID	APPROXIMATE AREA
	(SQ-FT)
WETLAND AREA "A" (WAA)	8850
WETLAND AREA "B" (WAB)	5964
WETLAND AREA "C" (WAC)	543
WETLAND AREA "D" (WAD)	318
WETLAND AREA "E" (WAE)	659
WETLAND AREA "F" (WAF)	3832
WETLAND AREA "G" (WAG)	624
WETLAND AREA "H" (WAH)	1956
WETLAND AREA "I" (WAI)	16195
WETLAND AREA "J" (WAJ)	5767
WETLAND AREA "K" (WAK)	5922
WETLAND AREA "L" (WAL)	60
WETLAND AREA "M" (WAM)	
	1400
WETLAND AREA "N" (WAN)	182
WETLAND AREA "O" (WAO)	7072
WETLAND AREA "P" (WAP)	9403
WETLAND AREA "Q" (WAQ)	696
WETLAND AREA "R" (WAR)	5949
WETLAND AREA "S" (WAS)	334
WETLAND AREA "T" (WAT)	2233
WETLAND AREA "U" (WAU)	3890
WETLAND AREA "V" (WAV)	11054
WETLAND TOTAL	19904
POTENTIAL JURISDICTIONAL ST	
	APPROXIMATE LENGTH
STREAM CHANNEL ID	(LF)
STREAM CHANNEL "A" (SCA)	136 (EPHEMERAL)
	112 (EPHEMERAL)
STREAM CHANNEL "B" (SCB)	1478 (INTERMITTENT)
	1005 (INTERMITTENT)
STREAM CHANNEL "C" (SCC)	,
	1035 (PERENNIAL)
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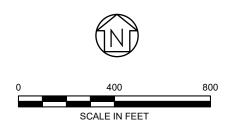


LEGEND



NOTES

- 1. SC STREAM CHANNEL LF - LINEAR FEET WA - WETLAND AREA
- 2. DELINEATION COMPLETED BY H&H ON SEPTEMBER 12-15, 2023.
- 3. LOCATIONS OF POTENTIAL STREAM AND WETLAND FEATURES ARE BASED ON FIELD GPS DATA AND ARE APPROXIMATE. POTENTIAL STREAM AND WETLAND BOUNDARIES HAVE NOT BEEN FULLY DELINEATED OR SURVEYED.
- 4. PLEASE NOTE THAT EPHEMERAL STREAM CHANNELS ARE NOT TYPICALLY REGULATED BY THE US ARMY CORPS OF ENGINEERS OR NC DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF WATER RESOURCES
- 5. PARCEL DATA OBTAINED FROM NC ONEMAP, 2023. AERIAL IMAGERY OBTAINED FROM ESRI, 2021



PRELIMINARY WETLAND DELINEATION MAP

UNDEVELOPED LAND 739 HATLEY ROAD PITTSBORO, NORTH CAROLINA

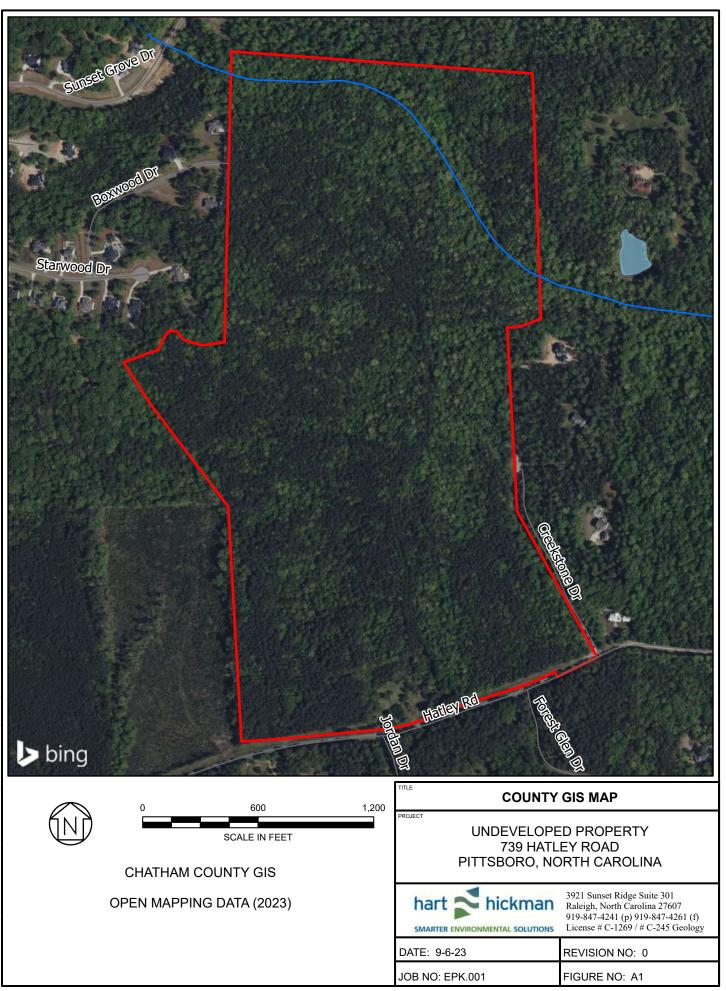
hart hickman	3921 Sunset Ridge Suite 301 Raleigh, North Carolina 27607 919-847-4241 (p) 919-847-4261 (f) License # C-1269 / # C-245 Geology
DATE: 9-18-2023	REVISION NO: 0
JOB NO. EPK-001	FIGURE NO: 2

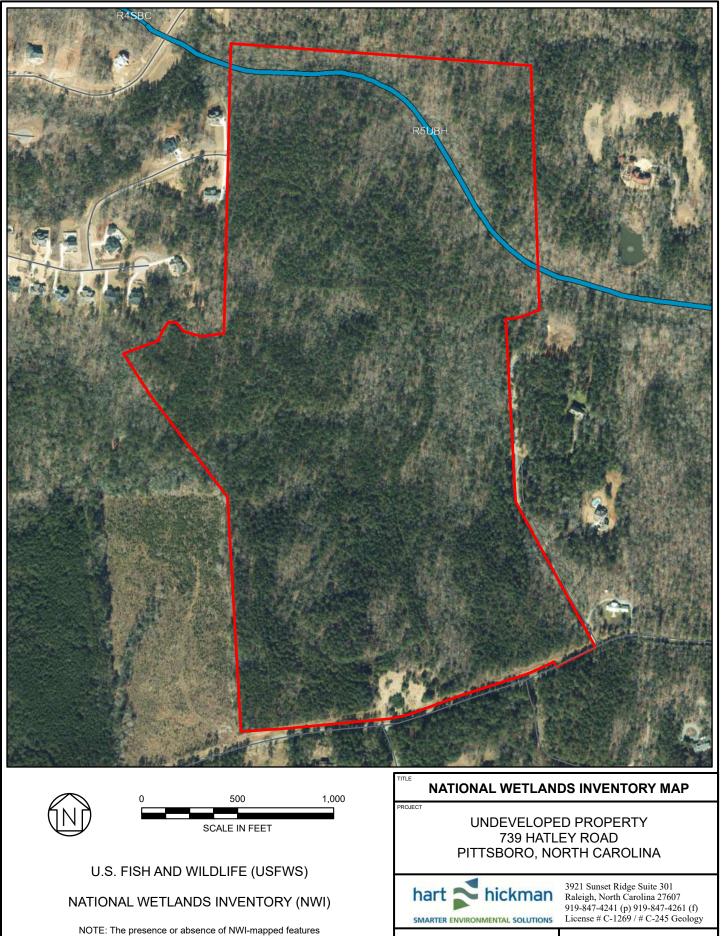
Appendix A

Support Documents

- Chatham County GIS Map (Figure A1)
- NWI Map (Figure A2)
- Web Soil Survey Map (Figure A3)
- Published Soil Survey Map (Figure A4)
- FEMA Flood Map (Figure A5)







DATE: 9-6-23

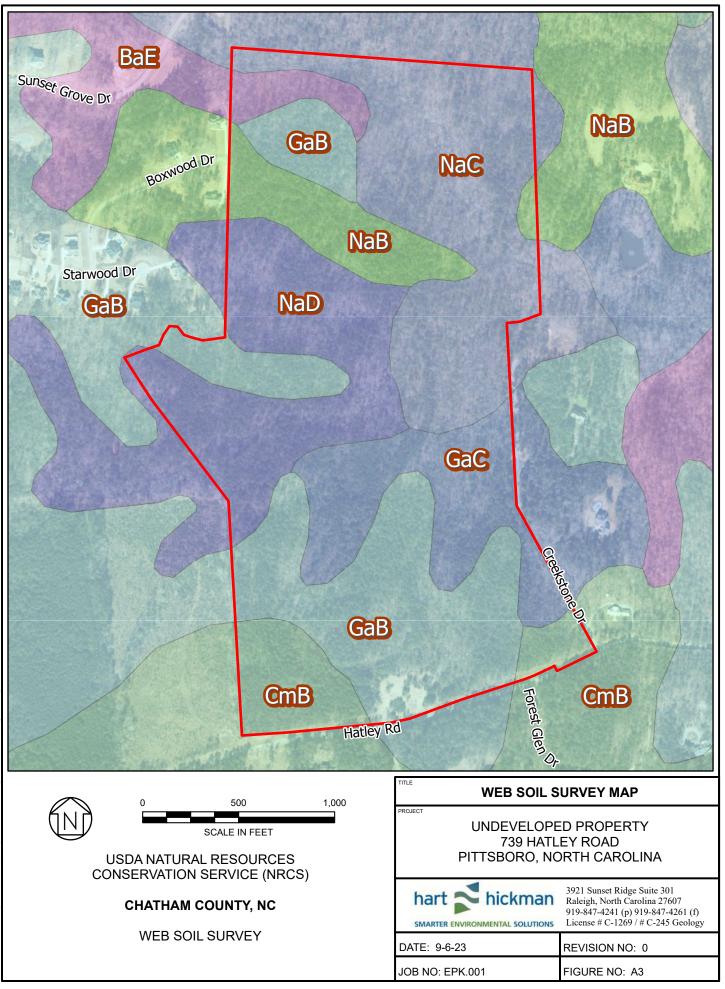
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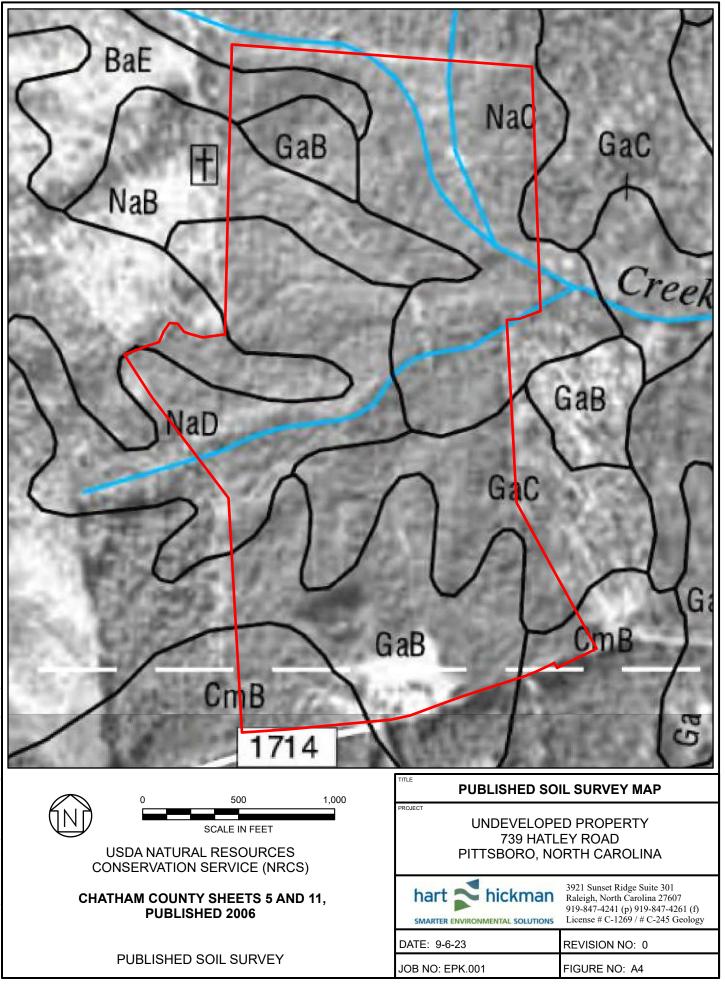
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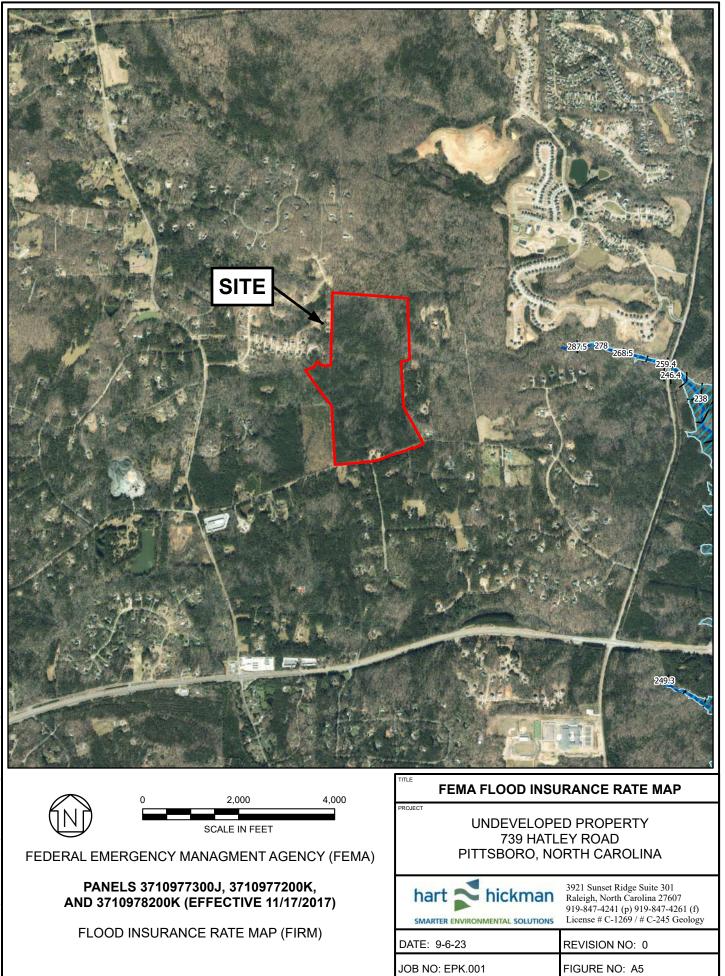
FIGURE NO: A2

in this figure's extent does not reflect the possible

jurisdictional status of any delineated feature.







Appendix B Survey Field Forms



Date: 9/12/23 - SCA	Project/Site: 739 Hatley Rd	Latitude:35.7529956 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0734957 W
Total Points:13.75Stream is at least intermittentif \geq 19 or perennial if \geq 30*	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal = 5)	Absent	Weak	Moderate	Strong
1 ^{a.} Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	Ō	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	N	o =0	Yes	= 3
^a artificial ditches are not rated; see discussions in manual				
B. Hydrology (Subtotal = <u>5</u>)			-	1
12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	3
14. Leaf litter	1.5	1	0.3	0
15. Sediment on plants or debris	0	0.9	1	1.5
16. Organic debris lines or piles	0	0.5	1	1.5
17. Soil-based evidence of high water table?	N	o = 0	Yes	=3
C. Biology (Subtotal = 3.75)				
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	Õ	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 = 0.79;	OBL = 1.5 Other = 0)
	de See n 35 of manue	al.		
*perennial streams may also be identified using other metho	us. See p. 55 of manua			

Date: 9/15/23 - SCAA	Project/Site: 739 Hatley Rd	Latitude: 35.7578269 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0727361 W
Total Points:13.75Stream is at least intermittentif \geq 19 or perennial if \geq 30*	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal = <u>^{5.5}_</u> _)	Absent	Weak	Moderate	Strong
1 ^a Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	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	N	o =0	Yes	= 3
artificial ditches are not rated; see discussions in manual				
B. Hydrology (Subtotal = <u>5.5</u>)			-	
12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	3
14. Leaf litter	1.5	1	0.9	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?	N	o = 0	Yes	=3
C. Biology (Subtotal = 2.75 _)				
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	Ō	0.5	1	1.5
26. Wetland plants in streambed		FACW = 0.75;	OBL = 1.5 Other =	$\hat{\mathbf{D}}$
*perennial streams may also be identified using other method	ds. See p. 35 of manua	al.		
Notes:				

Date: 9/12/23 - SCB	Project/Site: 739 Hatley Rd	Latitude:35.7504670 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0730017 W
Total Points:13Stream is at least intermittentif \geq 19 or perennial if \geq 30*	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal = <u>8</u>)	Absent	Weak	Moderate	Strong
1 ^{a.} Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	Ō	1	2	3
7. Recent alluvial deposits	0	1	2	3
8. Headcuts	0	1	2	3
9. Grade control	Ō	0.5	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	No	o =0	Yes	= 3
^a artificial ditches are not rated; see discussions in manual				
B. Hydrology (Subtotal = _2)				
12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	3
14. Leaf litter	1.5	1	0.9	0
15. Sediment on plants or debris	0	0.9	1	1.5
16. Organic debris lines or piles	0	0.5	1	1.5
17. Soil-based evidence of high water table?	No	o =0	Yes	= 3
C. Biology (Subtotal = 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	Ô	1	2	3
22. Fish	Ő	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0	0.5	1	1.5
25. Algae	- Ö	0.5	1	1.5
26. Wetland plants in streambed		FACW = 0.75;	OBL = 1.5 Other =	\mathbf{D}
*perennial streams may also be identified using other method	ods. See p. 35 of manua	al.		-
Notes:				

Date: 9/12/23 - SCB	Project/Site: 739 Hatley Rd	Latitude:35.7509046 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0734419 W
Total Points: 20.75 Stream is at least intermittentif ≥ 19 or perennial if $\geq 30^*$	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal =10)	Absent	Weak	Moderate	Strong
1 ^a Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	(1)	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	N	o =0	Yes	= 3
^a artificial ditches are not rated; see discussions in manual				
B. Hydrology (Subtotal = <u>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
15. Sediment on plants or debris	0	Q. 3	1	1.5
16. Organic debris lines or piles	0	0.5	(1)	1.5
17. Soil-based evidence of high water table?	N	0 = 0	Yes	=3
C. Biology (Subtotal = 5.75)	·			-
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	<u> </u>	1	2	3
22. Fish	0	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	<u> </u>	0.5	1	1.5
25. Algae	Ő	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 method	ds. See p. 35 of manua			
Notes:				

Date: 9/15/23 - SCBB	Project/Site: 739 Hatley Rd	Latitude: 35.7584972 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0734311 W
Total Points: 25.5 Stream is at least intermittentif \geq 19 or perennial if \geq 30*	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal = <u>13</u>)	Absent	Weak	Moderate	Strong
1 ^a Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	1	2	3
 In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence 	0	1	2	3
4. Particle size of stream substrate	0	1	(2)	3
5. Active/relict floodplain	0	()	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	N	o =0	Yes	= 3
^a artificial ditches are not rated; see discussions in manual				
B. Hydrology (Subtotal = <u>6.5</u>)				
12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	3
14. Leaf litter	(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	$\overline{(1)}$	1.5
17. Soil-based evidence of high water table?	N	o = 0	Yes	=3
C. Biology (Subtotal = $\6$)		_		
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	\bigcirc	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	Ō	0.5	1	1.5
26. Wetland plants in streambed		FACW = 0.75;	OBL = 1.5 Other =	\mathbf{O}
*perennial streams may also be identified using other metho	ds. See p. 35 of manua	al.		
Notes:				

Date: 9/12/23 - SCC	Project/Site: 739 Hatley Rd	Latitude: 35.7528218 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0752350 W
Total Points: 26.75 Stream is at least intermittentif ≥ 19 or perennial if $\geq 30^*$	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal = <u>16</u>)	Absent	Weak	Moderate	Strong
1 ^{a.} Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	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	N	0 = 0	Yes	=3
^a artificial ditches are not rated; see discussions in manual			•	-
B. Hydrology (Subtotal = <u>5.5</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?	N	o = 0	Yes	=3
C. Biology (Subtotal = 5.25)				
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	Ō	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 method	ods. See p. 35 of manua	al.		
Notes:				

Date: 9/12/23 - SCC	Project/Site: 739 Hatley Rd	Latitude:35.7548479 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0731399 W
Total Points: 33.75 Stream is at least intermittentif ≥ 19 or perennial if $\geq 30^*$	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal = <u>21</u>)	Absent	Weak	Moderate	Strong
^{a.} Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	1	2	3
 In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence 	0	1	2	3
Particle size of stream substrate	0	1	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
B. Headcuts	0	1	2	3
9. Grade control	0	0.3	1	1.5
0. Natural valley	0	0.5	1	. (5
1. Second or greater order channel	N	o = 0	Yes	-3
artificial ditches are not rated; see discussions in manual				
3. Hydrology (Subtotal = <u>7.5</u>)				
2. Presence of Baseflow	0	1	2	3
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?	N	0 = 0	Yes	=3
C. Biology (Subtotal = <u>5.25</u>)				
8. Fibrous roots in streambed	3	2	1	0
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	0.9	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0	0.5	1	1.5
25. Algae	Ō	0.5	1	1.5
26. Wetland plants in streambed	Ť	FACW = 0.75,	OBL = 1.5 Other = 0)
*perennial streams may also be identified using other methods	s. See p. 35 of manua	al.		
lates.				
Notes:				

Date: 9/12/23 - SCCC	Project/Site: 739 Hatley Rd	Latitude:35.7586657 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0763096 W
Total Points:13Stream is at least intermittentif \geq 19 or perennial if \geq 30*	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal = <u>8</u>)	Absent	Weak	Moderate	Strong
1 ^{a.} Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	Ō	1	2	3
7. Recent alluvial deposits	0	1	2	3
8. Headcuts	0	1	2	3
9. Grade control	Ō	0.5	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	No	o =0	Yes	= 3
^a artificial ditches are not rated; see discussions in manual				
B. Hydrology (Subtotal = _2)				
12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	3
14. Leaf litter	1.5	1	0.9	0
15. Sediment on plants or debris	0	0.9	1	1.5
16. Organic debris lines or piles	0	0.5	1	1.5
17. Soil-based evidence of high water table?	No	o =0	Yes	= 3
C. Biology (Subtotal = 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	Ó	1	2	3
22. Fish	Ő	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0	0.5	1	1.5
25. Algae	- Ö	0.5	1	1.5
26. Wetland plants in streambed		FACW = 0.75;	OBL = 1.5 Other =	\mathbf{D}
*perennial streams may also be identified using other method	ods. See p. 35 of manua	al.		-
Notes:				

Date: 9/12/23 - SCD	Project/Site: 739 Hatley Rd	Latitude:35.7522120 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0728843 W
Total Points:13.5Stream is at least intermittentif \geq 19 or perennial if \geq 30*	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal = <u>6.5</u>)	Absent	Weak	Moderate	Strong
1 ^a . Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	(1)	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	N	o =0	Yes	= 3
^a artificial ditches are not rated; see discussions in manual	·			
B. Hydrology (Subtotal = 5)				
12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	3
14. Leaf litter	1.5	1	0.9	0
15. Sediment on plants or debris	0	0.9	1	1.5
16. Organic debris lines or piles	0	0.5	1	1.5
17. Soil-based evidence of high water table?	N	o = 0	Yes	=3
C. Biology (Subtotal = 2)		_		
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	Õ	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 =	$\mathbf{\hat{b}}$
*perennial streams may also be identified using other method	ods. See p. 35 of manu	al.		-

Date: 9/12/23 - SCE	Project/Site: 739 Hatley Rd	Latitude:35.7544852 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0734563 W
Total Points:13Stream is at least intermittentif \geq 19 or perennial if \geq 30*	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal = 6) 1 ^{a.} Continuity of channel bed and bank 2. Sinuosity of channel along thalweg 3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1 (1)	2	3
3. In-channel structure: ex. riffle-pool, step-pool,	0			
		U)	2	3
	0	1	2	3
4. Particle size of stream substrate	0	(1)	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	Ō	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	Nc	D=0	Yes :	= 3
^a artificial ditches are not rated; see discussions in manual			-	
B. Hydrology (Subtotal = <u>5</u>)				
12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	3
14. Leaf litter	1.5	1	6.0	0
15. Sediment on plants or debris	0	Q.3	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 = 0	Yes :	= 3
C. Biology (Subtotal = 2)				
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	\mathcal{D}
*perennial streams may also be identified using other methods	See p. 35 of manua	il.		
Notes:				

Date: 9/12/23 - SCF	Project/Site: 739 Hatley Rd	Latitude:35.7543027 N
Evaluator: MRH - H&H	County: Chatham Longitude: 79.07406	
Total Points:13.75Stream is at least intermittentif \geq 19 or perennial if \geq 30*	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal = $\frac{5}{3}$)	Absent	Weak	Moderate	Strong
1 ^{a.} Continuity of channel bed and bank	0	(1)	2	3
2. Sinuosity of channel along thalweg	0	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	Ō	1	2	3
7. Recent alluvial deposits	0		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	N	o =0	Yes	= 3
^a artificial ditches are not rated; see discussions in manual				
B. Hydrology (Subtotal = <u>5</u>)				
12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	3
14. Leaf litter	1.5	1	0.9	0
15. Sediment on plants or debris	0	0.9	1	1.5
16. Organic debris lines or piles	0	0.5	(1)	1.5
17. Soil-based evidence of high water table?	N	No = 0		=3
C. Biology (Subtotal = 3.75)				
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 = 0.79;	OBL = 1.5 Other =	0
*perennial streams may also be identified using other method	ods. See p. 35 of manu	al.		

Date: 9/12/23 - SCG	Project/Site: 739 Hatley Rd	Latitude:35.7525696 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0750802 W
Total Points: 23.75 Stream is at least intermittentif ≥ 19 or perennial if $\geq 30^*$	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal = <u>13.5</u>)	Absent	Weak	Moderate	Strong
1 ^a . Continuity of channel bed and bank	0	1	2	(3)
2. Sinuosity of channel along thalweg	0	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	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	0.9	1	1.5
10. Natural valley	0	0.5	1	1.5
11. Second or greater order channel	N	o =0	Yes	= 3
^a artificial ditches are not rated; see discussions in manual	<u>.</u>			
B. Hydrology (Subtotal = <u>5.5</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 (Subtotal = 4.75)	·			
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	Ő	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 method	ods. See p. 35 of manu	al.		

Date: 9/12/23 - SCH	Project/Site: 739 Hatley Rd	Latitude:35.7509229 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0760213 W
Total Points:11Stream is at least intermittentif \geq 19 or perennial if \geq 30*	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal =6)	Absent	Weak	Moderate	Strong
1 ^{a.} Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
 In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence 	0	1	2	3
4. Particle size of stream substrate	0	1	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	Ō	1	2	3
7. Recent alluvial deposits	0	1	2	3
8. Headcuts	0	1	2	3
9. Grade control	Ō	0.5	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	N	o =0	Yes	= 3
artificial ditches are not rated; see discussions in manual	·			
B. Hydrology (Subtotal = _2)				
2. Presence of Baseflow	0	1	2	3
3. Iron oxidizing bacteria	0	1	2	3
4. Leaf litter	1.5	1	(.5)	0
15. Sediment on plants or debris	0	0.9	1	1.5
16. Organic debris lines or piles	0	0.5	(1)	1.5
17. Soil-based evidence of high water table?	N	<u>o =0</u>	Yes	= 3
C. Biology (Subtotal = 3)				
18. Fibrous roots in streambed	3	2	1	0
 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	Ō	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 =	$\overline{0}$
*perennial streams may also be identified using other metho	ds. See p. 35 of manua	al.		
Notes:				

Date: 9/12/23 - SCI	Project/Site: 739 Hatley Rd	Latitude:35.7509229 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0759599 W
Total Points:11Stream is at least intermittentif \geq 19 or perennial if \geq 30*	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal = 6)	Absent	Weak	Moderate	Strong
1 ^{a.} Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	(1)	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	Õ	1	2	3
7. Recent alluvial deposits	0	1	2	3
8. Headcuts	Ō	1	2	3
9. Grade control	Ō	0.5	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	No	D=0	Yes	= 3
^a artificial ditches are not rated; see discussions in manual				
B. Hydrology (Subtotal = _2)				
12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	3
14. Leaf litter	1.5	1	0.9	0
15. Sediment on plants or debris	0	(.)	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 = 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	Ô	1	2	3
22. Fish	Ő	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	<u> </u>	0.5	1	1.5
25. Algae	- Ö	0.5	1	1.5
26. Wetland plants in streambed		FACW = 0.75;	OBL = 1.5 Other =	\mathbf{D}
*perennial streams may also be identified using other method	ods. See p. 35 of manua	al.		-
Notes:				

Date: 9/12/23 - SCJ	Project/Site: 739 Hatley Rd	Latitude:35.7510403 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0760091 W
Total Points:11Stream is at least intermittentif \geq 19 or perennial if \geq 30*	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal =6)	Absent	Weak	Moderate	Strong
1 ^{a.} Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
 In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence 	0	1	2	3
4. Particle size of stream substrate	0	1	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	Ō	1	2	3
7. Recent alluvial deposits	0	1	2	3
8. Headcuts	0	1	2	3
9. Grade control	Ō	0.5	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	N	o =0	Yes	= 3
artificial ditches are not rated; see discussions in manual				
B. Hydrology (Subtotal = 2)				
12. Presence of Baseflow	0	1	2	3
3. Iron oxidizing bacteria	0	1	2	3
14. Leaf litter	1.5	1	(.5)	0
15. Sediment on plants or debris	0	0.9	1	1.5
16. Organic debris lines or piles	0	0.5	(1)	1.5
17. Soil-based evidence of high water table?	N	<u>o =0</u>	Yes	= 3
C. Biology (Subtotal = 3)				
18. Fibrous roots in streambed	3	2	1	0
 Rooted upland plants in streambed 	3	2	1	0
20. Macrobenthos (note diversity and abundance)	0	1	2	3
21. Aquatic Mollusks	<u> </u>	1	2	3
22. Fish	Ő	0.5	1	1.5
23. Crayfish	<u> </u>	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 =	$\overline{0}$
*perennial streams may also be identified using other metho	ds. See p. 35 of manu	al.		
Notes:				

Date: 9/12/23 - SCK	Project/Site: 739 Hatley Rd	Latitude:35.7510158 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0760480 W
Total Points:11Stream is at least intermittentif \geq 19 or perennial if \geq 30*	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal = 6)	Absent	Weak	Moderate	Strong	
1 ^{a.} Continuity of channel bed and bank	0	1	2	3	
2. Sinuosity of channel along thalweg	0	(1)	2	3	
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3	
4. Particle size of stream substrate	0	1	2	3	
5. Active/relict floodplain	0	1	2	3	
6. Depositional bars or benches	Ō	1	2	3	
7. Recent alluvial deposits	0	1	2	3	
8. Headcuts	0	1	2	3	
9. Grade control	Ō	0.5	1	1.5	
10. Natural valley	0	0.5	(1)	1.5	
11. Second or greater order channel	N	No =(0)		Yes = 3	
^a artificial ditches are not rated; see discussions in manual					
B. Hydrology (Subtotal = _2)			_		
12. Presence of Baseflow	0	1	2	3	
13. Iron oxidizing bacteria	0	1	2	3	
14. Leaf litter	1.5	1	(.)	0	
15. Sediment on plants or debris	0	0.9	1	1.5	
16. Organic debris lines or piles	0	0.5	(1)	1.5	
17. Soil-based evidence of high water table?	N	No =0		Yes = 3	
C. Biology (Subtotal = 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	Ō	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 =)	
*perennial streams may also be identified using other method	ods. See p. 35 of manua	al.			
Notes:					

Date: 9/12/23 - SCF	Project/Site: 739 Hatley Rd	Latitude:35.7543027 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0740655 W
Total Points:13Stream is at least intermittentif \geq 19 or perennial if \geq 30*	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal = <u>8</u>)	Absent	Weak	Moderate	Strong	
1 ^{a.} Continuity of channel bed and bank	0	1	2	3	
2. Sinuosity of channel along thalweg	0	(1)	2	3	
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3	
4. Particle size of stream substrate	0	(1)	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	N	No =(0)		Yes = 3	
^a artificial ditches are not rated; see discussions in manual					
B. Hydrology (Subtotal = _2)			-		
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	6.9	1	1.5	
16. Organic debris lines or piles	0	0.9	1	1.5	
17. Soil-based evidence of high water table?	N	No = 0		Yes = 3	
C. Biology (Subtotal = 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	Ō	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 €	$\hat{\mathbf{D}}$	
*perennial streams may also be identified using other method	ods. See p. 35 of manua	al.			
Notes:					

Date: 9/13/23 - SCM	Project/Site: 739 Hatley Rd	Latitude: 35.7521212 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0766273 W
Total Points:12Stream is at least intermittentif \geq 19 or perennial if \geq 30*	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal = <u>5.5</u>)	Absent	Weak	Moderate	Strong
1 ^{a.} Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
 In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence 	0	1	2	3
4. Particle size of stream substrate	0	(1)	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	Ō	1	2	3
7. Recent alluvial deposits	0	1	2	3
3. Headcuts	0	1	2	3
9. Grade control	0	0.5	1	1.5
10. Natural valley	0	Q.5	1	1.5
11. Second or greater order channel	No	D=0	Yes	= 3
artificial ditches are not rated; see discussions in manual				
B. Hydrology (Subtotal = <u>4.5</u>)			-	1
12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	3
14. Leaf litter	1.5	1	0.9	0
15. Sediment on plants or debris	0	0.5	1	1.5
 Organic debris lines or piles 	0	0.5	1	1.5
17. Soil-based evidence of high water table?	No	0 = 0	Yes	= 3
C. Biology (Subtotal = 2)				
 Fibrous roots in streambed 	3	2	1	0
 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	\bigcirc	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 =	
	ls. See p. 35 of manua	al.		
*perennial streams may also be identified using other method				

Date: 9/12/23 - SCM	Project/Site: 739 Hatley Rd	Latitude: 35.7523168 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0762488 W
Total Points: 24 Stream is at least intermittentif ≥ 19 or perennial if $\geq 30^*$	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal = <u>12.5</u>)	Absent	Weak	Moderate	Strong
1 ^{a.} Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	(1)	2	3
4. Particle size of stream substrate	0	1	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	0	0	2	3
7. Recent alluvial deposits	0	1	2	3
8. Headcuts	0	1	2	3
9. Grade control	0	0.9	1	1.5
10. Natural valley	0	0.5	1	1.5
11. Second or greater order channel	N	o =0	Yes	= 3
^a artificial ditches are not rated; see discussions in manual				
B. Hydrology (Subtotal = <u>5.5</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?	N	No = 0 Yes = 3		=3
C. Biology (Subtotal = $_6$)				
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 =	$\mathbf{\hat{b}}$
*perennial streams may also be identified using other metho	ods. See p. 35 of manua	al.	`	-

Date: 9/13/23 - SCN	Project/Site: 739 Hatley Rd	Latitude:35.7530198 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0776999 W
Total Points: 14.75 Stream is at least intermittentif ≥ 19 or perennial if $\geq 30^*$	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal =5.5)	Absent	Weak	Moderate	Strong
1 ^{a.} Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	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	(.5)	1	1.5
11. Second or greater order channel	N	o =0	Yes	= 3
^a artificial ditches are not rated; see discussions in manual			•	
B. Hydrology (Subtotal = 5.5)				
12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	3
14. Leaf litter	1.5	1	0.9	0
15. Sediment on plants or debris	0	0.5	()	1.5
16. Organic debris lines or piles	0	0.5	(1)	1.5
17. Soil-based evidence of high water table?	N	No = 0 Yes =		=3
C. Biology (Subtotal = <u>3.75</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)	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	Ō	0.5	1	1.5
26. Wetland plants in streambed		FACW =0.75;	OBL = 1.5 Other =	C
*perennial streams may also be identified using other metho	ods. See p. 35 of manua	al.		
Notes:				

Date: 9/12/23 - SCN	Project/Site: 739 Hatley Rd	Latitude:35.7534879 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0760290 W
Total Points:21Stream is at least intermittentif \geq 19 or perennial if \geq 30*	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal =)	Absent	Weak	Moderate	Strong
1 ^a Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
 In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence 	0	1	2	3
4. Particle size of stream substrate	0	1	2	3
5. Active/relict floodplain	0	1	2	3
Depositional bars or benches	0	1	2	3
7. Recent alluvial deposits	0	(Ť)	2	3
8. Headcuts	0	$\overline{(1)}$	2	3
9. Grade control	0	0.9	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	N	o =0	Yes	= 3
artificial ditches are not rated; see discussions in manual		-		
B. Hydrology (Subtotal = <u>5.5</u>)				
12. Presence of Baseflow	0	1	2	3
 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?	N	0 = 0	Yes	=3
C. Biology (Subtotal =6)		_	·	
18. Fibrous roots in streambed	3	2	1	0
 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	Ō	0.5	1	1.5
26. Wetland plants in streambed		FACW = 0.75;	OBL = 1.5 Other =	$\overline{)}$
*perennial streams may also be identified using other metho	ds. See p. 35 of manua	al.		
Notes:				

Date: 9/14/23 - SCO	Project/Site: 739 Hatley Rd	Latitude:35.7542776 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0774147 W
Total Points: 25 Stream is at least intermittentif \geq 19 or perennial if \geq 30*	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal = 13.5)	Absent	Weak	Moderate	Strong
1 ^a Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	0	0	2	3
7. Recent alluvial deposits	0	1	2	3
3. Headcuts	0	1	2	3
9. Grade control	0	0.9	1	1.5
10. Natural valley	0	0.5	1	1.5
11. Second or greater order channel	N	o =0	Yes	= 3
artificial ditches are not rated; see discussions in manual	·	-		
B. Hydrology (Subtotal = <u>5.5</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?	N	0 = 0	Yes	=3
C. Biology (Subtotal = $\{6}$)		_		
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	Ō	0.5	1	1.5
26. Wetland plants in streambed		FACW = 0.75;	OBL = 1.5 Other =	\mathbf{D}
*perennial streams may also be identified using other method	ds. See p. 35 of manua	al.		
Notes:				

Date: 9/14/23 - SCO	Project/Site: 739 Hatley Rd	Latitude:35.7549058 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0749056 W
Total Points: 37.25 Stream is at least intermittentif ≥ 19 or perennial if $\geq 30^*$	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal = <u>19</u>)	Absent	Weak	Moderate	Strong
1 ^a Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	(1)	2	3
4. Particle size of stream substrate	0	1	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	0.3	1	1.5
10. Natural valley	0	0.5	1	(5
11. Second or greater order channel	N	o = 0	Yes	-3
^a artificial ditches are not rated; see discussions in manual				-
B. Hydrology (Subtotal = <u>9.5</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?	N	0 = 0	Yes	=3
C. Biology (Subtotal = 8.75)	•			
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	(.)	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0	0.5	1	1.5
25. Algae	0	6,9	1	1.5
26. Wetland plants in streambed		FACW = 0.75,	OBL = 1.5 Other = 0)
*perennial streams may also be identified using other method	ls. See p. 35 of manua	al.		
Notes:				

Date: 9/12/23 - SCP	Project/Site: 739 Hatley Rd	Latitude:35.7586523 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0764583 W
Total Points:13Stream is at least intermittentif \geq 19 or perennial if \geq 30*	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal = <u>8</u>)	Absent	Weak	Moderate	Strong
1 ^{a.} Continuity of channel bed and bank	0	1	2	(3)
2. Sinuosity of channel along thalweg	0	(1)	2	3
 In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence 	0	1	2	3
4. Particle size of stream substrate	0	1	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	N	o =0	Yes	= 3
artificial ditches are not rated; see discussions in manual	·		•	
B. Hydrology (Subtotal = 2)				
2. Presence of Baseflow	0	1	2	3
3. Iron oxidizing bacteria	0	1	2	3
4. Leaf litter	1.5	1	0.5	0
5. Sediment on plants or debris	0	0.9	1	1.5
 Organic debris lines or piles 	0	0.9	1	1.5
17. Soil-based evidence of high water table?	N	<u>0</u> =0	Yes	= 3
C. Biology (Subtotal = 3)				
18. Fibrous roots in streambed	3	2	1	0
 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
2. Fish	Ő	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 €	$\hat{\mathbf{D}}$
*perennial streams may also be identified using other metho	ds. See p. 35 of manu	al.		
Notes:				
NOIES.				

Date: 9/15/23 - SCP	Project/Site: 739 Hatley Rd	Latitude:35.7586438 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0757571 W
Total Points: 25 Stream is at least intermittentif ≥ 19 or perennial if $\geq 30^*$	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal =) ^{12.}	^o Absent	Weak	Moderate	Strong
1 ^a Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool,	0	1	2	3
ripple-pool sequence	-			
4. Particle size of stream substrate	0	(1)	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	0	Ð	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	(.5)
11. Second or greater order channel	N	o =0	Yes	= 3
^a artificial ditches are not rated; see discussions in manual				
B. Hydrology (Subtotal = <u>6.5</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?	N	0 = 0	Yes	=3
C. Biology (Subtotal = 6)				
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	<u> </u>	0.5	1	1.5
23. Crayfish	Ō	0.5	1	1.5
24. Amphibians	<u> </u>	0.5	1	1.5
25. Algae	Ő	0.5	1	1.5
26. Wetland plants in streambed		FACW = 0.75;	OBL = 1.5 Other =	$\dot{0}$
*perennial streams may also be identified using other method	ds. See p. 35 of manua	al.	``````````````````````````````````````	-

Date: 9/12/23 - SCQ	Project/Site: 739 Hatley Rd	Latitude: 35.7528218 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0752350 W
Total Points: 23.75 Stream is at least intermittentif ≥ 19 or perennial if $\geq 30^*$	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal = <u>13</u>)	Absent	Weak	Moderate	Strong
1 ^{a.} Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	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	N	o =0	Yes	= 3
^a artificial ditches are not rated; see discussions in manual	•			
B. Hydrology (Subtotal = <u>5.5</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?	N	o = 0	Yes	=3
C. Biology (Subtotal = 5.25)				_
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	Ō	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 metho	ods. See p. 35 of manua	al.		
Notes:				

Date: 9/12/23 - SCR	Project/Site: 739 Hatley Rd	Latitude:35.7551856 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0766273 W
Total Points: 35.75 Stream is at least intermittentif ≥ 19 or perennial if $\geq 30^*$	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal = <u>19</u>)	Absent	Weak	Moderate	Strong
1 ^a Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	1	2	3
 In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence 	0	(1	2	3
4. Particle size of stream substrate	0	1	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	0.3	1	1.5
10. Natural valley	0	0.5	1	.5
11. Second or greater order channel	N	o = 0	Yes	-3
^a artificial ditches are not rated; see discussions in manual				
B. Hydrology (Subtotal = <u>8.5</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?	N	o = 0	Yes	=3
C. Biology (Subtotal = 8.25)	~			
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	\bigcirc	2	3
21. Aquatic Mollusks	\bigcirc	1	2	3
22. Fish	0	0.9	1	1.5
23. Crayfish	\bigcirc	0.5	1	1.5
24. Amphibians	0	0.5	1	1.5
25. Algae	\bigcirc	0.5	1	1.5
26. Wetland plants in streambed		FACW = 0.75	OBL = 1.5 Other = 0	C
*perennial streams may also be identified using other method	ds. See p. 35 of manua	al.		
Notes:				

Date: 9/12/23 - SCS	Project/Site: 739 Hatley Rd	Latitude:35.7543488 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0757089 W
Total Points:12.25Stream is at least intermittentif \geq 19 or perennial if \geq 30*	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal = $\frac{7}{1}$)	Absent	Weak	Moderate	Strong
1 ^{a.} Continuity of channel bed and bank	0	1	2	(3)
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	Ō	1	2	3
7. Recent alluvial deposits	0	1	2	3
8. Headcuts	0	1	2	3
9. Grade control	Ō	0.5	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	N	o =0	Yes	= 3
^a artificial ditches are not rated; see discussions in manual				
B. Hydrology (Subtotal = <u>2.5</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	0.3	1	1.5
16. Organic debris lines or piles	0	0.5	(1)	1.5
17. Soil-based evidence of high water table?	N	o =0	Yes	= 3
C. Biology (Subtotal = $\underline{2.75}$ _)				
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	Õ	0.5	1	1.5
23. Crayfish	<u> </u>	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 = 0.79;	OBL = 1.5 Other =	0
*perennial streams may also be identified using other method	ods. See p. 35 of manua	al.		
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Date: 9/12/23 - SCT	Project/Site: 739 Hatley Rd	Latitude:35.7546388 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0757889 W
Total Points:12.25Stream is at least intermittentif \geq 19 or perennial if \geq 30*	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal = $\frac{7}{1}$)	Absent	Weak	Moderate	Strong
1 ^{a.} Continuity of channel bed and bank	0	1	2	(3)
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	Ō	1	2	3
7. Recent alluvial deposits	0	1	2	3
8. Headcuts	0	1	2	3
9. Grade control	Ō	0.5	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	N	o =0	Yes	= 3
^a artificial ditches are not rated; see discussions in manual				
B. Hydrology (Subtotal = <u>2.5</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	0.3	1	1.5
16. Organic debris lines or piles	0	0.5	(1)	1.5
17. Soil-based evidence of high water table?	N	o =0	Yes	= 3
C. Biology (Subtotal = $\underline{2.75}$ _)				
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	Õ	0.5	1	1.5
23. Crayfish	<u> </u>	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 = 0.79;	OBL = 1.5 Other =	0
*perennial streams may also be identified using other method	ods. See p. 35 of manua	al.		
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Date: 9/12/23 - SCU	Project/Site: 739 Hatley Rd	Latitude:35.7543621 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0758030 W
Total Points:12.25Stream is at least intermittentif \geq 19 or perennial if \geq 30*	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal = $\frac{7}{1}$)	Absent	Weak	Moderate	Strong
1 ^{a.} Continuity of channel bed and bank	0	1	2	(3)
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	Ō	1	2	3
7. Recent alluvial deposits	0	1	2	3
8. Headcuts	0	1	2	3
9. Grade control	Ō	0.5	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	N	o =0	Yes	= 3
^a artificial ditches are not rated; see discussions in manual				
B. Hydrology (Subtotal = <u>2.5</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	0.3	1	1.5
16. Organic debris lines or piles	0	0.5	(1)	1.5
17. Soil-based evidence of high water table?	N	o =0	Yes	= 3
C. Biology (Subtotal = $\underline{2.75}$ _)				
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	Õ	0.5	1	1.5
23. Crayfish	<u> </u>	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 = 0.79;	OBL = 1.5 Other =	0
*perennial streams may also be identified using other method	ods. See p. 35 of manua	al.		
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Date: 9/12/23 - SCV	Project/Site: 739 Hatley Rd	Latitude: 35.7543550N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0760192 W
Total Points: 12.25 Stream is at least intermittentif ≥ 19 or perennial if $\geq 30^*$	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal = $\frac{7}{1}$)	Absent	Weak	Moderate	Strong
1 ^{a.} Continuity of channel bed and bank	0	1	2	(3)
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	Ō	1	2	3
7. Recent alluvial deposits	0	1	2	3
8. Headcuts	0	1	2	3
9. Grade control	Ō	0.5	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	N	o =0	Yes	= 3
^a artificial ditches are not rated; see discussions in manual				
B. Hydrology (Subtotal = <u>2.5</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	0.3	1	1.5
16. Organic debris lines or piles	0	0.5	(1)	1.5
17. Soil-based evidence of high water table?	N	o =0	Yes	= 3
C. Biology (Subtotal = $\underline{2.75}$ _)				
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	Õ	0.5	1	1.5
23. Crayfish	<u> </u>	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 = 0.79;	OBL = 1.5 Other =	0
*perennial streams may also be identified using other method	ods. See p. 35 of manua	al.		
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Date: 9/12/23 - SCW	Project/Site: 739 Hatley Rd	Latitude: 35.7585815 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0769318 W
Total Points: 34.25 Stream is at least intermittentif ≥ 19 or perennial if $\geq 30^*$	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

0 0 0	1 1 (1)	2 (2)	3
0		2	3
-	(1	<u> </u>	-
0		2	3
	1	2	3
0	1)	2	3
0	(1)	2	3
0	1	2	3
0	1	2	3
0	0.3	1	1.5
0	0.5	1	.5
N	0 = 0	Yes	-3
0	1	2	3
0	Ð	2	3
(.5	1	0.5	0
0	0.5		1.5
0	0.5	1	(1.5)
N	0 = 0	Yes :	=3
3	2	1	0
3	2	1	0
0	1	2	3
0	1	2	3
0	0.5	\bigcirc	1.5
0	0.5	1	1.5
0	0.5	1	1.5
Ō	0.5	1	1.5
Ŭ	FACW = 0.75,	OBL = 1.5 Other = 0)
See p. 35 of manua	al.		
	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	0 1 2 0 1 2 0 0.5 1 0 0.5 1 0 0.5 1 0 1 2 0 1 2 0 1 2 0 1 2 0 1 2 0 0.5 1 0 0.5 1 0 0.5 1 0 0.5 1 0 1 2 0 1 2 0 1 2 0 1 2 0 1 2 0 0.5 1 0 0.5 1 0 0.5 1 0 0.5 1 0 0.5 1 0 0.5 1 0 0.5 1 0 0.5 1 0 0.5 1 0 0.5 </td

Date: 9/12/23 - SCX	Project/Site: 739 Hatley Rd	Latitude:35.7560573 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0726285 W
Total Points: 49.5 Stream is at least intermittentif ≥ 19 or perennial if $\geq 30^*$	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal =24.5)	Absent	Weak	Moderate	Strong
1 ^a Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	1	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	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	.5
11. Second or greater order channel	No	0 = 0	Yes	=3
^a artificial ditches are not rated; see discussions in manual				
B. Hydrology (Subtotal = <u>11</u>)			1	ſ
12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	3
14. Leaf litter	(5)	1	0.5	0
15. Sediment on plants or debris	Ō	0.5		1.5
16. Organic debris lines or piles	0	0.5	1	(1.5)
17. Soil-based evidence of high water table?	No	0 = 0	Yes	= 3
C. Biology (Subtotal = 14)				
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	0.3	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 = ()
	ls. See p. 35 of manua	l.		
*perennial streams may also be identified using other method				
*perennial streams may also be identified using other method Notes:				

Date: 9/12/23 - SCY	Project/Site: 739 Hatley Rd	Latitude:35.7556859 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0730656 W
Total Points:12.75Stream is at least intermittentif \geq 19 or perennial if \geq 30*	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal = 7)	Absent	Weak	Moderate	Strong
1 ^a . Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	2	3
5. Active/relict floodplain	0	1	2	3
6. Depositional bars or benches	Ō	1	2	3
7. Recent alluvial deposits	0		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	N	o =0	Yes	= 3
^a artificial ditches are not rated; see discussions in manual				
B. Hydrology (Subtotal = _2)				
12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	3
14. Leaf litter	1.5	1	0.9	0
15. Sediment on plants or debris	0	0.9	1	1.5
16. Organic debris lines or piles	0	0.5	1	1.5
17. Soil-based evidence of high water table?	N	0 €0	Yes	= 3
C. Biology (Subtotal = 3.75)				
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	C
*perennial streams may also be identified using other method	ods. See p. 35 of manu	al.		

Date: 9/12/23 - SCZ	Project/Site: 739 Hatley Rd	Latitude:35.7580788 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0727045 W
Total Points: 25 Stream is at least intermittentif ≥ 19 or perennial if $\geq 30^*$	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	2 2 2 2 2 2 2 2 2 2 2 2 2 2	3 3 0
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	2 2 2 2 2 2 2 2 2 2 2 2 2 2	3 3 3 3 3 3 1.5 (.) 3 3 3 3 0
$ \begin{array}{c c} 1 \\ 1 \\ 1 \\ 1 \\ 0.5 \\ 0.5 \\ 0.5 \\ No = 0 \\ \end{array} $	2 2 2 2 2 2 2 2 2 1 1 1 1 Yes = 2 2 0.5 1	3 3 3 3 1.5 (.) 3 3 3 0
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	2 2 2 2 2 2 2 1 1 1 1 Yes = 2 2 0.5 1	3 3 3 1.5 (5) 3 3 3 0
1 0.5 0.5 No =0	2 2 (2) 1 1 Yes = 2 2 0.5 (1)	3 3 1.5 3 3 3 3 0
1 0.5 0.5 No =0 1 1	2 (2) 1 1 Yes = 2 0.5 (1)	3 3 1.5 (.) 3 3 3 0
1 0.5 0.5 No =0 1 1	2 1 Yes = 2 0.5 (1)	3 1.5 3 3 3 0
0.5 0.5 No =0 1 1	1 1 Yes = 2 0.5 1	1.5 (.) 3 3 3 3 0
0.5 No =0 1 1	1 Yes = 2 0.5 (1)	(.) 3 3 3 0
No =0	Yes =	3 3 3 0
	2 2 0.5 1	3 3 0
1	2 0.5 (1)	3 0
1	2 0.5 (1)	3 0
1	2 0.5 (1)	3 0
1	0.5	0
	1	-
	V	4 -
0.5	4	1.5
0.5	1	1.5
No = 0	Yes =	3
		-
2	1	0
2	1	0
1	2	3
1	2	3
0.5	1	1.5
0.5	1	1.5
0.5	1	1.5
0.5	1	1.5
0.5		
0.5	5; OBL = 1.5 Other = 0)
0.5	5; OBL = 1.5 Other = 0^{-1})
0.5 FACW = 0.7	5; OBL = 1.5 Other =(0))

Date: 9/12/23 - SCZ	Project/Site: 739 Hatley Rd	Latitude: 35.7584873 N
Evaluator: MRH - H&H	County: Chatham	Longitude: 79.0725162 W
Total Points: 35.25 Stream is at least intermittentif ≥ 19 or perennial if $\geq 30^*$	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name: Farrington, NC

A. Geomorphology (Subtotal = <u>19</u>)	Absent	Weak	Moderate	Strong
1 ^a Continuity of channel bed and bank	0	1	2	3
2. Sinuosity of channel along thalweg	0	1	2	3
 In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence 	0	(1)	2	3
4. Particle size of stream substrate	0	1	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	0.3	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	N	0 = 0	Yes	-3
^a artificial ditches are not rated; see discussions in manual	•			-
B. Hydrology (Subtotal =)				
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?	N	0 = 0	Yes	=3
C. Biology (Subtotal = 8.25)	•			
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	0.9	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0	0.5	1	1.5
25. Algae	Ō	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 method	ds. See p. 35 of manua	al.		
Notes:				

U.S. Arm WETLAND DETERMINATION DATAS See ERDC/EL TR-12-9; t		ains and Piedr	-	Requirement	0710-0024, Exp:11/30/2024 Control Symbol EXEMPT: R 335-15, paragraph 5-2a)
Project/Site: EPK.001 - 739 Hatley Road		City/Count	y: <u>Pittsboro / Cha</u>	tham	Sampling Date: 9/12/15
Applicant/Owner: Epkon Hospitality				State: NC	Sampling Point: TP-1
Investigator(s): Matt Hugo - H&H		Section, Towns	ship, Range:		
Landform (hillside, terrace, etc.): swale	Lo	cal relief (conca	ave, convex, none): concave	Slope (%): 10
Subregion (LRR or MLRA): LRR P, MLRA	136 Lat: 35.7509046 N	·	Long: 79.07	34419 W	Datum: NAD 83
Soil Map Unit Name: Georgeville silt loam -			0	NWI classifica	
Are climatic / hydrologic conditions on the si		ar?	Yes X N	 Jo (Ifnoe	explain in Remarks.)
Are Vegetation, Soil, or Hydro				nstances" present?	
				any answers in Re	
Are Vegetation, Soil, or Hydr				-	
SUMMARY OF FINDINGS – Attack	h site map showing s	sampling po	oint locations,	, transects, im	portant features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Samp within a Wet		Yes X	No
Remarks: Data point is representative of jurisdictional	wetland areas WAB, WAK	a, WAP, and WA	ΑV		
HYDROLOGY					
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B X Water-Stained Leaves (B9) Aquatic Fauna (B13)	True Aquatic Plants Hydrogen Sulfide Oc Oxidized Rhizospher Presence of Reduce Recent Iron Reductio Thin Muck Surface (Other (Explain in Re	dor (C1) res on Living Ro d Iron (C4) on in Tilled Soils C7)	oots (C3)	Surface Soil Crac Sparsely Vegetate Drainage Patterns Moss Trim Lines Dry-Season Wate Crayfish Burrows	ed Concave Surface (B8) 5 (B10) B16) r Table (C2) (C8) on Aerial Imagery (C9) ed Plants (D1) tion (D2) (D3) Relief (D4)
Surface Water Present? Yes	No X Depth (inch	es):			
Water Table Present? Yes	No X Depth (inch				
Saturation Present? Yes X	No Depth (inch	es): 14	Wetland Hydro	ology Present?	Yes X No
(includes capillary fringe)					
Describe Recorded Data (stream gauge, m Remarks:	onitoring well, aerial photos	s, previous insp	ecuons), ir availac	ле. 	

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Tree Stratum (Plot size: 30ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Pinus taeda	30	Yes	FAC	
2. Acer rubrum	<u></u>	Yes	FAC	Number of Dominant SpeciesThat Are OBL, FACW, or FAC:7(A)
3. Quercus phellos	5	No	FAC	
·	5			Total Number of Dominant
4. Carya ovalis	3	No	FACU	Species Across All Strata: 10 (B)
5. <u>Liquidambar styraciflua</u>	3	No	FAC	Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 70.0% (A/B)
7		Tatal Querr		Prevalence Index worksheet:
	58	=Total Cover	40	Total % Cover of: Multiply by:
	<u>9</u> 20%	6 of total cover:	12	OBL species 0 x 1 = 0
Sapling/Shrub Stratum (Plot size: 15ft radius)	0	N	540	FACW species $0 x^2 = 0$
1. Liquidambar styraciflua	3	No No	FAC	FAC species 87 x 3 = 261 FACUL 20 10 101
2. <u>Acer rubrum</u>	5	Yes	FAC	FACU species <u>26</u> x 4 = <u>104</u>
3. <u>Ilex opaca</u>	10	Yes	FACU	UPL species $0 \times 5 = 0$
4.		<u> </u>		Column Totals: <u>113</u> (A) <u>365</u> (B)
5		.		Prevalence Index = B/A = 3.23
6.		.		Hydrophytic Vegetation Indicators:
7		- <u> </u>		1 - Rapid Test for Hydrophytic Vegetation
8				X 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
	18	=Total Cover		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	9 20%	6 of total cover:	4	data in Remarks or on a separate sheet)
<u>Herb Stratum</u> (Plot size: <u>10 ft radius</u>)				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Toxicodendron radicans	3	Yes	FAC	¹ Indicators of hydric soil and wetland hydrology must be
2. Microstegium vimineum	10	Yes	FAC	present, unless disturbed or problematic.
3. Parthenocissus quinquefolia	1	No	FACU	Definitions of Four Vegetation Strata:
4. Botrypus virginianus	1	No	FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5. Lonicera japonica	2	No	FACU	more in diameter at breast height (DBH), regardless of
6. Polystichum acrostichoides	3	Yes	FACU	height.
7. Carex sp.	1	No		Sapling/Shrub – Woody plants, excluding vines, less
8. Vitis rotundifolia	2	No	FAC	than 3 in. DBH and greater than or equal to 3.28 ft
9. Senecio hieraciifolius	1	No	FACU	(1 m) tall.
10. Chasmanthium laxum	1	No	FAC	Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
	25	=Total Cover		Woody Vine – All woody vines greater than 3.28 ft in
50% of total cover:1	3 20%	6 of total cover:	5	height.
Woody Vine Stratum (Plot size: 30 ft radius)				
1. Lonicera japonica	3	Yes	FACU	
2. Toxicodendron radicans	5	Yes	FAC	
3. Smilax rotundifolia	5	Yes	FAC	
4.				
5.				Ib sheet be the
	13	=Total Cover		Hydrophytic Vegetation
50% of total cover:	7 20%	6 of total cover:	3	Present? Yes X No
Remarks: (Include photo numbers here or on a sepa	arate sheet)			
Remarks. (include photo numbers here of on a sepa				

							onfirm the ab	sence of it	iuicators.)	
Depth (inches)	Matrix Color (moist)	%	Color (moist)	x Featur %	es Type ¹	Loc ²	Texture		Rem	arks
	, <u> </u>			70	турс				T C III	laiko
0-4	10YR 3/6	100					Loamy/Cla	yey		
4-20	10YR 6/2	90	10YR 7/8	10	C	M	Loamy/Cla	yey	Prominent redox	concentrations
					_					
					_					
	oncentration, D=Depl	etion, RM	=Reduced Matrix, I	MS=Mas	ked Sand	d Grains.	² L		L=Pore Lining, N	
Hydric Soil			Debarelue P		faaa (60		447 440)			tic Hydric Soils
Histosol									Muck (A10) (M I	
	pipedon (A2)									
	stic (A3)		Loamy Muc		ILRA 136					
	n Sulfide (A4)		Loamy Gley				Piedmont Floodplain Soils (F19			Solis (F19)
	Layers (A5)		X Depleted Ma	• • •					LRA 136, 147)	(504)
	ick (A10) (LRR N)	()	Redox Dark						Parent Material	()
	d Below Dark Surface	(ATT)	Depleted Da						utside MLRA 12	
	ark Surface (A12)		? Redox Depr		. ,				Shallow Dark S	
	lucky Mineral (S1)		Iron-Mangai		sses (F1)	2) (LRR M	Ν,	Othe	r (Explain in Rer	marks)
	Bleyed Matrix (S4)		MLRA 13			400 400		31		
	edox (S5)		Umbric Surf						rs of hydrophytic	-
	Matrix (S6)		Piedmont Fl						and hydrology m	
	rface (S7)		Red Parent	wateria	(FZI) (IV	LRA 127	, 147, 140)	unie:	ss disturbed or p	noplematic.
	Layer (if observed):									
Type:								. D	No X	N
Depth (ii	nches):						Hydric Soi	Present?	Yes X	No
Remarks:										

U.S. Army WETLAND DETERMINATION DATA S See ERDC/EL TR-12-9; th	-	OMB Control #: 0710-00 Requirement Control S (Authority: AR 335-15,	Symbol EXEMPT:		
Project/Site: EPK.001 - 739 Hatley Road		City/Count	y: Pittsboro / Cha	athamSampli	ing Date: <u>9/12/15</u>
Applicant/Owner: Epkon Hospitality				State: NC Sampli	ing Point: TP-2
Investigator(s): Matt Hugo - H&H		Section, Town	ship, Range:		
Landform (hillside, terrace, etc.): crenulatio	n Lo		ave, convex, none	e): concave S	lope (%): 10
Subregion (LRR or MLRA): LRR P, MLRA 1			Long: 79.07		Datum: NAD 83
Soil Map Unit Name: Georgeville silt loam -		•	Eong	NWI classification: No	
			Vac V N		
Are climatic / hydrologic conditions on the site			Yes X N		
Are Vegetation, Soil, or Hydro					Yes X No
Are Vegetation, Soil, or Hydro	logynaturally prob	lematic? (I	f needed, explain	any answers in Remarks.)	
SUMMARY OF FINDINGS – Attach	site map showing	sampling po	oint locations	, transects, importar	nt features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Samp within a We		Yes <u>X</u> No	
Data point is representative of jurisdictional v	wetland areas WAA, WAF	, and WAC.			
HYDROLOGY					
Wetland Hydrology Indicators:			Sec	condary Indicators (minimu	m of two required)
Primary Indicators (minimum of one is requi			<u> </u>	Surface Soil Cracks (B6)	
Surface Water (A1)	True Aquatic Plants Hydrogen Sulfide Od			Sparsely Vegetated Conc	ave Surface (B8)
High Water Table (A2) X Saturation (A3)	Oxidized Rhizosphe	. ,		Drainage Patterns (B10) Moss Trim Lines (B16)	
Water Marks (B1)	Presence of Reduce	-		Dry-Season Water Table	(C2)
Sediment Deposits (B2)	Recent Iron Reducti	. ,	s (C6)	Crayfish Burrows (C8)	(-)
Drift Deposits (B3)	Thin Muck Surface ((C7)		Saturation Visible on Aeria	al Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Re	emarks)		Stunted or Stressed Plant	ts (D1)
Iron Deposits (B5)			X	Geomorphic Position (D2))
Inundation Visible on Aerial Imagery (B	7)			Shallow Aquitard (D3)	
X Water-Stained Leaves (B9)				Microtopographic Relief ([D4)
Aquatic Fauna (B13)				FAC-Neutral Test (D5)	
Field Observations: Surface Water Present? Yes	No X Depth (inch	222):			
Water Table Present? Yes	No X Depth (inch No X Depth (inch				
Saturation Present? Yes X	No Depth (inch		Wetland Hvdr	ology Present?	res X No
(includes capillary fringe)	· 、	, <u> </u>	-	0,	
Describe Recorded Data (stream gauge, mo	onitoring well, aerial photo	s, previous insp	ections), if availal	ble:	
Remarks:					

· · · · · ·				
	Absolute	Dominant	Indicator	Demission Technologies
Tree Stratum (Plot size: <u>30ft radius</u>)	% Cover	Species?	Status	Dominance Test worksheet:
1. Pinus taeda	25	Yes	FAC	Number of Dominant Species
2. Liquidambar styraciflua	5	No	FAC	That Are OBL, FACW, or FAC: (A)
3. Fraxinus pennsylvanica	5	No	FACW	Total Number of Dominant
4. Ostrya virginiana	3	No	FACU	Species Across All Strata: 4 (B)
5				Percent of Dominant Species
6				That Are OBL, FACW, or FAC: 100.0% (A/B)
7				Prevalence Index worksheet:
	38	=Total Cover		Total % Cover of: Multiply by:
50% of total cover:1	9 20%	of total cover:	8	OBL species 0 x 1 = 0
<u>Sapling/Shrub Stratum</u> (Plot size: 15ft radius)				FACW species 5 x 2 = 10
1. Liquidambar styraciflua	5	Yes	FAC	FAC species 64 x 3 = 192
2. Acer rubrum	2	Yes	FAC	FACU species 9 x 4 = 36
3. Ilex opaca	1	No	FACU	UPL species 0 x 5 = 0
4.		·		Column Totals: 78 (A) 238 (B)
5.				Prevalence Index = $B/A = 3.05$
6.		·		Hydrophytic Vegetation Indicators:
7.		·		1 - Rapid Test for Hydrophytic Vegetation
		·		
8.		·		X 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
	8	=Total Cover		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:4	20%	of total cover:	2	data in Remarks or on a separate sheet)
<u>Herb Stratum</u> (Plot size: <u>10 ft radius</u>)				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Microstegium vimineum	25	Yes	FAC	¹ Indicators of hydric soil and wetland hydrology must be
2. Polystichum acrostichoides	3	No	FACU	present, unless disturbed or problematic.
3. Commelina communis	1	No	FAC	Definitions of Four Vegetation Strata:
4. Carex sp.	1	No		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5				more in diameter at breast height (DBH), regardless of
6				height.
7.				Sapling/Shrub – Woody plants, excluding vines, less
8.				than 3 in. DBH and greater than or equal to 3.28 ft
9.				(1 m) tall.
10.				Herb – All herbaceous (non-woody) plants, regardless
11.		·		of size, and woody plants less than 3.28 ft tall.
	30	=Total Cover		Woody Vine – All woody vines greater than 3.28 ft in
50% of total cover: 1		of total cover:	6	height.
Woody Vine Stratum (Plot size: 30 ft radius)				
/	2	No	EACU	
1. Lonicera japonica	2		FACU	
2. Toxicodendron radicans	1	No	FAC	
3.		·		
4				
5		·		Hydrophytic
	3	=Total Cover		Vegetation
50% of total cover:2	20%	of total cover:	1	Present? Yes X No
Remarks: (Include photo numbers here or on a sepa	rate sheet.)			·

Depth	Matrix		Pode	x Featur			onfirm the ab					
inches)	Color (moist)	%	Color (moist)	% realur	Type ¹	Loc ²	Texture	2		Rem	arks	
1				70	турс	200				Rom	uno	
0-2	10YR 3/6	100					Loamy/Cla	уеу				
2-20	10YR 6/2	90	2.5YR 5/8	10	С	М	Loamy/Cla	ayey	Prom	inent redox	concentrations	
		·										
Type: C=C	oncentration, D=Depl	letion, RM	=Reduced Matrix, I	MS=Mas	ked Sand	Grains.	² L	ocation:	PL=Po	re Lining, M	=Matrix.	
	Indicators:	,									tic Hydric Soil	
Histosol	Polyvalue B	elow Sur	face (S8	(MLRA	147, 148)	2	2 cm Muck (A10) (MLRA 147)					
Histic E	Thin Dark S	urface (S	69) (MLR	A 147, 14	48)	C	oast Pra	irie Redox ((A16)			
Black H	istic (A3)		Loamy Mucky Mineral (F1) (MLRA 136)						(MLRA 147, 148)			
Hydroge	en Sulfide (A4)		Loamy Gley	Loamy Gleyed Matrix (F2)						Piedmont Floodplain Soils (F19)		
	d Layers (A5)		X Depleted Ma	atrix (F3))					400 447)		
Stratifie			Redox Dark Surface (F6)						136, 147)			
	uck (A10) (LRR N)			Surface	(F6)				•	136, 147) nt Material ((F21)	
2 cm Mu	uck (A10) (LRR N)	e (A11)	Redox Dark		. ,			R	ed Parei	nt Material (,	
2 cm Mu Deplete	• • • •	e (A11)		ark Surfa	ce (F7)			R	ed Parer (outside	nt Material (e MLRA 12	(F21) 7, 147, 148) urface (F22)	
2 cm Mu Deplete Thick Da	uck (A10) (LRR N) d Below Dark Surface ark Surface (A12)	e (A11)	Redox Dark	ark Surfa essions	ice (F7) (F8)	2) (LRR N	J,	R	ed Parer (outside ery Shal	nt Material (e MLRA 12	7, 147, 148) urface (F22)	
2 cm Mu Deplete Thick Da Sandy M	uck (A10) (LRR N) d Below Dark Surface ark Surface (A12) /lucky Mineral (S1)	e (A11)	Redox Dark Depleted Da ? Redox Depr	ark Surfa essions nese Ma	ice (F7) (F8)	2) (LRR N	١,	R	ed Parer (outside ery Shal	nt Material (e MLRA 12 low Dark Su	7, 147, 148) urface (F22)	
2 cm Mu Deplete Thick Da Sandy M Sandy C	uck (A10) (LRR N) d Below Dark Surface ark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4)	∋ (A11)	Redox Dark Depleted Da Redox Depr Iron-Manga MLRA 13	ark Surfa ressions nese Ma: 6)	ce (F7) (F8) sses (F12	, ,		R	ed Parer (outside ery Shal ther (Exp	nt Material (e MLRA 12 low Dark Su plain in Ren	7, 147, 148) urface (F22) narks)	
2 cm Mu Depleter Thick Da Sandy M Sandy C Sandy F	uck (A10) (LRR N) d Below Dark Surface ark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4) Redox (S5)	e (A11)	Redox Dark Depleted Da Redox Depr Iron-Manga MLRA 13 Umbric Surl	ark Surfa essions nese Mas 6) face (F13	ce (F7) (F8) sses (F12 3) (MLRA	122, 136	5)	Ve Ve O ⁻ ³ Indica	ed Parer (outside ery Shall ther (Exp ators of I	nt Material (e MLRA 12 low Dark Su plain in Ren hydrophytic	7, 147, 148) urface (F22) narks) vegetation and	
2 cm Mi Deplete Thick Da Sandy M Sandy C Sandy F Stripped	uck (A10) (LRR N) d Below Dark Surface ark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4)	e (A11)	Redox Dark Depleted Da Redox Depr Iron-Manga MLRA 13	ark Surfa ressions nese Mas 6) face (F13 loodplain	ce (F7) (F8) sses (F12 3) (MLRA Soils (F	122, 136 19) (MLR	5) A 148)	—	ed Parer (outside ery Shall ther (Exp ators of I etland h	nt Material (e MLRA 12 low Dark Su plain in Ren hydrophytic	7, 147, 148) urface (F22) narks) vegetation and ust be present,	
2 cm Mi Deplete Thick Da Sandy M Sandy C Sandy F Strippec Dark Su	uck (A10) (LRR N) d Below Dark Surface ark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4) Redox (S5) I Matrix (S6)		Redox Dark Depleted Da Redox Depr Iron-Manga MLRA 13 Umbric Surf Piedmont F	ark Surfa ressions nese Mas 6) face (F13 loodplain	ce (F7) (F8) sses (F12 3) (MLRA Soils (F	122, 136 19) (MLR	5) A 148)	—	ed Parer (outside ery Shall ther (Exp ators of I etland h	nt Material (e MLRA 12 low Dark Su plain in Ren hydrophytic ydrology mu	7, 147, 148) urface (F22) narks) vegetation and ust be present,	
2 cm Mu Deplete Thick Da Sandy M Sandy C Sandy F Strippec Dark Su	uck (A10) (LRR N) d Below Dark Surface ark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4) Redox (S5) I Matrix (S6) rface (S7)		Redox Dark Depleted Da Redox Depr Iron-Manga MLRA 13 Umbric Surf Piedmont F	ark Surfa ressions nese Mas 6) face (F13 loodplain	ce (F7) (F8) sses (F12 3) (MLRA Soils (F	122, 136 19) (MLR	5) A 148)	—	ed Parer (outside ery Shall ther (Exp ators of I etland h	nt Material (e MLRA 12 low Dark Su plain in Ren hydrophytic ydrology mu	7, 147, 148) urface (F22) narks) vegetation and ust be present,	

U.S. Army WETLAND DETERMINATION DATA S See ERDC/EL TR-12-9; th		ains and Pied	-	Requirement Co	0710-0024, Exp:11/ ontrol Symbol EXE 335-15, paragraph	EMPT:
Project/Site: EPK.001 - 739 Hatley Road		City/Count	y: <u>Pittsboro / Cha</u>	tham s	Sampling Date:	9/13/15
Applicant/Owner: Epkon Hospitality				State:_State:_St	Sampling Point:	TP-3
Investigator(s): Matt Hugo - H&H		Section, Town	ship, Range:		-	
Landform (hillside, terrace, etc.): crenulatio	n Lo	cal relief (conca	ave, convex, none): concave	Slope (%):	10
Subregion (LRR or MLRA): LRR P, MLRA 1	36 Lat: 35.7509046 N		Long: 79.07	34419 W	Datum:	NAD 83
Soil Map Unit Name: Georgeville silt loam -				NWI classificatio	on: None	
Are climatic / hydrologic conditions on the site	e typical for this time of ye	ar?	Yes X N	lo (If no, ex	plain in Remarks	5.)
Are Vegetation , Soil , or Hydro				nstances" present?	Yes X	-
Are Vegetation , Soil , or Hydro				any answers in Rem		
SUMMARY OF FINDINGS – Attach				-		es, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Samp within a Wet		Yes X	No	
Remarks: Data point is representative of jurisdictional	wetland areas WAH, WAI,	WAJ, WAN				
HYDROLOGY						
Wetland Hydrology Indicators:			Sec	ondary Indicators (n	ninimum of two re	equired)
Primary Indicators (minimum of one is requi				Surface Soil Cracks		
Surface Water (A1)	True Aquatic Plants			Sparsely Vegetated		ce (B8)
High Water Table (A2) X Saturation (A3)	Hydrogen Sulfide Oc Oxidized Rhizospher			Drainage Patterns (Moss Trim Lines (B		
Water Marks (B1)	Presence of Reduce	-		Dry-Season Water	,	
Sediment Deposits (B2)	Recent Iron Reduction		s (C6)	Crayfish Burrows (C		
Drift Deposits (B3)	Thin Muck Surface (C7)		Saturation Visible o	n Aerial Imagery	(C9)
Algal Mat or Crust (B4)	Other (Explain in Re	marks)		Stunted or Stressed	l Plants (D1)	
Iron Deposits (B5)	_,		X	Geomorphic Positio		
Inundation Visible on Aerial Imagery (B	7)			Shallow Aquitard (D	-	
X Water-Stained Leaves (B9) Aquatic Fauna (B13)				Microtopographic R FAC-Neutral Test (I	. ,	
Field Observations:					55)	
Surface Water Present? Yes	No X Depth (inch	ec).				
Water Table Present? Yes	No X Depth (inch					
Saturation Present? Yes X	No Depth (inch		Wetland Hydro	ology Present?	Yes X	No
(includes capillary fringe)	· · ·	·	-			
Describe Recorded Data (stream gauge, mo	onitoring well, aerial photos	s, previous insp	ections), if availab	ole:		
Remarks:						

	Absolute	Dominant	Indicator	
<u>Tree Stratum</u> (Plot size: <u>30ft radius</u>)	% Cover	Species?	Status	Dominance Test worksheet:
1. Pinus taeda	25	Yes	FAC	Number of Dominant Species
2. Liquidambar styraciflua	5	No	FAC	That Are OBL, FACW, or FAC: (A)
3. Fraxinus pennsylvanica	5	No	FACW	Total Number of Dominant
4. <u>Ostrya virginiana</u>	3	No	FACU	Species Across All Strata:(B)
5.				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 100.0% (A/B) Prevalence Index worksheet:
7	38	=Total Cover		
50% of total cover: 1		of total cover:	8	$\begin{array}{c c} \hline Total \% Cover of: \\ \hline OBL species \\ 0 \\ \hline x 1 = 0 \\ \hline \end{array}$
Sapling/Shrub Stratum (Plot size: 15ft radius)	9 2070		0	FACW species $5 \times 2 = 10$
1. Liquidambar styraciflua	5	Yes	FAC	FAC species $64 \times 3 = 192$
2. Acer rubrum	2	Yes	FAC	FACU species $9 \times 4 = 36$
3. Ilex opaca	1	No	FACU	$\begin{array}{c} 1 \text{ Accospecies} \\ \hline 0 \\ \text{UPL species} \\ 0 \\ \text{x5} = \\ 0 \\ \end{array}$
4.	<u> </u>		17.00	Column Totals: 78 (A) 238 (B)
5.				Prevalence Index = $B/A = 3.05$
6.				Hydrophytic Vegetation Indicators:
7.				1 - Rapid Test for Hydrophytic Vegetation
8.				X 2 - Dominance Test is >50%
9.				$3 - Prevalence Index is \leq 3.0^{1}$
	8	=Total Cover		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 4		of total cover:	2	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 10 ft radius)	<u> </u>			Problematic Hydrophytic Vegetation ¹ (Explain)
1. Microstegium vimineum	25	Yes	FAC	
2. Polystichum acrostichoides	3	No	FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3. Commelina communis	1	No	FAC	Definitions of Four Vegetation Strata:
4. Carex sp.	1	No		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5.	<u> </u>			more in diameter at breast height (DBH), regardless of
6.				height.
7.				Sapling/Shrub – Woody plants, excluding vines, less
8.				than 3 in. DBH and greater than or equal to 3.28 ft
9.				(1 m) tall.
10.				Herb – All herbaceous (non-woody) plants, regardless
11.				of size, and woody plants less than 3.28 ft tall.
	30	=Total Cover		Woody Vine – All woody vines greater than 3.28 ft in
50% of total cover: 1		of total cover:	6	height.
Woody Vine Stratum (Plot size: 30 ft radius)				
1. Lonicera japonica	2	No	FACU	
2. Toxicodendron radicans	1	No	FAC	
3.				
4.				
5.				
	3	=Total Cover		Hydrophytic Vegetation
50% of total cover: 2		of total cover:	1	Present? Yes X No
Remarks: (Include photo numbers here or on a sepa	rate sheet)			
Remarks. (include photo numbers here of on a sepa	late sheet.)			

Depth	Matrix		Redo	x Featur	es					
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	e Remarks		
0-2	10YR 3/6	100					Loamy/Cla	ayey		
2-20	10YR 6/2	90	2.5YR 5/8	10	С	Μ	Loamy/Cla	ayey Prominent redox concentrations		
		·								
	oncentration, D=Depl	letion, RM	=Reduced Matrix, I	MS=Mas	ked Sand	Grains.	2L	Location: PL=Pore Lining, M=Matrix.		
Hydric Soil Indicators:						447 440)	Indicators for Problematic Hydric Soil			
Histosol (A1)			Polyvalue Below Surface (S8) (MLRA 147, Thin Dark Surface (S9) (MLRA 147, 148)							
	stic (A3)		Loamy Muc	•		ILRA 136	(MLRA 147, 148) Biodmont Electrolatin Spile (E10)			
_ · ·	n Sulfide (A4)		Loamy Gley		• •			Piedmont Floodplain Soils (F19)		
	d Layers (A5)		X Depleted Matrix (F3) Redox Dark Surface (F6)					(MLRA 136, 147)		
	ıck (A10) (LRR N)	(• •			Red Parent Material (F21)		
·	d Below Dark Surface	e (A11)	Depleted Da		• •			(outside MLRA 127, 147, 148)		
	ark Surface (A12)		? Redox Depr					Very Shallow Dark Surface (F22)		
-	Nucky Mineral (S1)		Iron-Mangai		sses (F12		Ν,	Other (Explain in Remarks)		
	Bleyed Matrix (S4)		MLRA 13	•		400 400	• \			
	Redox (S5)		Umbric Surf Piedmont F	•	<i>,</i> .	•	, , , , , , , , , , , , , , , , , , , ,			
	Matrix (S6) rface (S7)		Red Parent	•	`	<i>,</i> .		wetland hydrology must be present, unless disturbed or problematic.		
	Layer (if observed):				() (, , ,			
Type:	,									
Depth (ii	nches):						Hydric So	il Present? Yes X No		
Remarks:	·						-			

U.S. Army WETLAND DETERMINATION DATA S See ERDC/EL TR-12-9; th		ains and Piedn	-	Requirement Co	710-0024, Exp:11/30/2024 ntrol Symbol EXEMPT: 35-15, paragraph 5-2a)
Project/Site: EPK.001 - 739 Hatley Road		City/County	: Pittsboro / Cha	tham S	ampling Date: <u>9/13/15</u>
Applicant/Owner: Epkon Hospitality				State: NC S	Sampling Point: TP-4
Investigator(s): Matt Hugo - H&H		Section, Towns	hip, Range:		
Landform (hillside, terrace, etc.): crenulatio	n Lo		ve, convex, none): concave	Slope (%): 10
Subregion (LRR or MLRA): LRR P, MLRA 1			Long: 79.07		Datum: NAD 83
Soil Map Unit Name: Nanford-Badin comple				NWI classification	
· · ·					
Are climatic / hydrologic conditions on the site					blain in Remarks.)
Are Vegetation, Soil, or Hydro				stances" present?	Yes X No
Are Vegetation, Soil, or Hydro	logynaturally probl	ematic? (If	needed, explain a	any answers in Rema	arks.)
SUMMARY OF FINDINGS – Attach	site map showing s	sampling po	nt locations,	transects, impo	ortant features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sample within a Wet		Yes <u>X</u> I	No
Remarks: Data point is representative of jurisdictional	wetland areas WAK, WAL	, WAO, and WA	P.		
HYDROLOGY					
Wetland Hydrology Indicators:			Sec	ondary Indicators (m	inimum of two required)
Primary Indicators (minimum of one is requi				Surface Soil Cracks	
Surface Water (A1)	True Aquatic Plants				Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Oc			Drainage Patterns (E	
Saturation (A3) Water Marks (B1)	Oxidized Rhizospher Presence of Reduce	-		Moss Trim Lines (B1 Dry-Season Water T	
Sediment Deposits (B2)	Recent Iron Reduction	()		Crayfish Burrows (C	
Drift Deposits (B3)	Thin Muck Surface (n Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Re	,		Stunted or Stressed	••••
Iron Deposits (B5)				Geomorphic Position	
Inundation Visible on Aerial Imagery (B	7)			Shallow Aquitard (D	3)
X Water-Stained Leaves (B9)				Microtopographic Re	
Aquatic Fauna (B13)				FAC-Neutral Test (D	95)
Field Observations:					
Surface Water Present? Yes	No X Depth (inch				
Water Table Present? Yes	No X Depth (inch				
Saturation Present? Yes (includes capillary fringe)	No X Depth (inch	es):	Wetland Hydro	ology Present?	Yes X No
Describe Recorded Data (stream gauge, mo	nitoring well aerial photos	s previous inspe	ctions) if availab	le.	
			otiono), il avallad		
Remarks:					

		-		
Tree Stratum (Distaize: 20ft radius)	Absolute	Dominant	Indicator	Deminance Test werksheet
<u>Tree Stratum</u> (Plot size: <u>30ft radius</u>)	% Cover	Species?	Status	Dominance Test worksheet:
Acer rubrum Liguidambar styraciflua	<u>5</u> 15	Yes Yes	FAC FAC	Number of Dominant SpeciesThat Are OBL, FACW, or FAC:7(A)
· · ·	5			
3. Fraxinus pennsylvanica	5	Yes	FACW	Total Number of Dominant
4. Pinus taeda		Yes	FAC	Species Across All Strata: 8 (B)
5. <u>Carya ovalis</u>	5	Yes	FACU	Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 87.5% (A/B)
7				Prevalence Index worksheet:
		=Total Cover	7	Total % Cover of: Multiply by:
50% of total cover: 1	8 20%	of total cover:	7	OBL species 0 x 1 = 0
Sapling/Shrub Stratum (Plot size: 15ft radius)	~	Vaa	540	FACW species8 $x 2 = 16$ FAC species50 $x 2 = 477$
1. Liquidambar styraciflua	5	Yes	FAC	FAC species $59 \times 3 = 177$
2. <u>Acer rubrum</u>	5	Yes	FAC	FACU species 12 $x 4 = 48$
3.				UPL species $0 \times 5 = 0$
4.				Column Totals: 79 (A) 241 (B)
5				Prevalence Index = B/A = 3.05
6.				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				X 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
		=Total Cover		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:5	20%	of total cover:	2	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 10 ft radius)				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Microstegium vimineum	20	Yes	FAC	¹ Indicators of hydric soil and wetland hydrology must be
2. Polystichum acrostichoides	5	No	FACU	present, unless disturbed or problematic.
3. Lobelia cardinalis	3	No	FACW	Definitions of Four Vegetation Strata:
4. Carex sp.	1	No		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5. Toxicodendron radicans	3	No	FAC	more in diameter at breast height (DBH), regardless of
6				height.
7				Sapling/Shrub – Woody plants, excluding vines, less
8				than 3 in. DBH and greater than or equal to 3.28 ft
9				(1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11.				of size, and woody plants less than 3.28 ft tall.
	32	=Total Cover		Woody Vine – All woody vines greater than 3.28 ft in
50% of total cover: 1	6 20%	of total cover:	7	height.
Woody Vine Stratum (Plot size: 30 ft radius)				
1. Lonicera japonica	2	No	FACU	
2. Toxicodendron radicans	1	No	FAC	
3.				
4.				
5.				
	3	=Total Cover		Hydrophytic
50% of total cover: 2		of total cover:	1	Vegetation Present? Yes X No
			<u> </u>	
Remarks: (Include photo numbers here or on a sepa	rate sheet.)			

Depth	Matrix		Redo	x Featur	es						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Rema	arks	
0-2	10YR 3/6	100					Loamy/Clay	yey			
2-20	10YR 6/2	90	2.5YR 5/8	10	С	М	Loamy/Clay	yey Pr	ominent redox	concentrations	
		·									
¹ Type: C=Co	oncentration, D=Depl	etion, RM	=Reduced Matrix, I	//S=Mas	ked Sand	d Grains.	2	ocation: PL=	Pore Lining, M	=Matrix.	
Hydric Soil	Indicators:								-	tic Hydric Soils	
Histosol	(A1)		Polyvalue B	elow Sur	face (S8) (MLRA	147, 148)	2 cm N	luck (A10) (ML	.RA 147)	
Histic Ep	pipedon (A2)		Thin Dark S	urface (S	59) (MLR	A 147, 14	48)	Coast	Prairie Redox (A16)	
Black Hi	stic (A3)		Loamy Mucky Mineral (F1) (MLRA 136) (MLRA 147, 148)						-		
	n Sulfide (A4)		Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F1						Soils (F19)		
_ · ·	d Layers (A5)		X Depleted Matrix (F3) (MLRA 136, 147)								
	ick (A10) (LRR N)		Redox Dark Surface (F6) Red Parent Material (F21)						F21)		
	d Below Dark Surface	(A11)	Depleted Da		. ,				ide MLRA 12	,	
	ark Surface (A12)	()	? Redox Depr		• •			•	hallow Dark Su		
	lucky Mineral (S1)		Iron-Mangar		. ,	2) (LRR N	N.		Explain in Ren		
	Bleyed Matrix (S4)		MLRA 13			-/ (-,)	
	Redox (S5)		Umbric Surf	,	3) (MI RA	122 136	5)	³ Indicators	of hydrophytic	vegetation and	
	Matrix (S6)		Piedmont Fl	•	<i>,</i> .						
	rface (S7)		Red Parent	•	•				disturbed or p	•	
Restrictive I	Layer (if observed):										
Type:											
Depth (ir	nches):		Hydric Soil Present? Yes						Yes X	No	
							-				

U.S. Army WETLAND DETERMINATION DATA S See ERDC/EL TR-12-9; th		ains and Piedn	-	Requirement (0710-0024, Exp:11/30/2024 Control Symbol EXEMPT: 2 335-15, paragraph 5-2a)		
Project/Site: EPK.001 - 739 Hatley Road		City/County	: Pittsboro / Cha	tham	Sampling Date: 9/13/15		
Applicant/Owner: Epkon Hospitality				State: NC	Sampling Point: TP-5		
Investigator(s): Matt Hugo - H&H		Section, Towns	hip, Range:				
Landform (hillside, terrace, etc.): floodplain	terrace Lo	cal relief (conca	ve, convex, none): concave	Slope (%): 3		
Subregion (LRR or MLRA): LRR P, MLRA 1			Long: 79.07		Datum: NAD 83		
Soil Map Unit Name: Nanford-Badin comple				NWI classificat			
Are climatic / hydrologic conditions on the site		ar?					
					xplain in Remarks.)		
Are Vegetation, Soil, or Hydro				nstances" present?			
Are Vegetation, Soil, or Hydro	logynaturally probl	ematic? (If	needed, explain	any answers in Rer	marks.)		
SUMMARY OF FINDINGS – Attach	site map showing s	sampling po	int locations,	transects, im	portant features, etc.		
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sample within a Wet		Yes <u>X</u>	No		
Remarks: Data point is representative of jurisdictional	wetland areas WAD, WAE	, WAS, WAT, a	nd WAQ. Most o	ccupy relict stream	meanders.		
HYDROLOGY							
Wetland Hydrology Indicators:			Sec	ondary Indicators (minimum of two required)		
Primary Indicators (minimum of one is requi	red; check all that apply)			Surface Soil Crack	· · · ·		
Surface Water (A1)	True Aquatic Plants				d Concave Surface (B8)		
High Water Table (A2)	Hydrogen Sulfide Oc	. ,		Drainage Patterns (B10)			
X Saturation (A3) Water Marks (B1)	Oxidized Rhizospher Presence of Reduce	-		Moss Trim Lines (I Dry-Season Water			
Sediment Deposits (B2)	Recent Iron Reduction			Crayfish Burrows (. ,		
Drift Deposits (B3)	Thin Muck Surface (Nisible on Aerial Imagery (C9)		
Algal Mat or Crust (B4)	Other (Explain in Re	,			tunted or Stressed Plants (D1)		
Iron Deposits (B5)		,		Geomorphic Positi			
Inundation Visible on Aerial Imagery (B	7)			Shallow Aquitard (D3)		
X Water-Stained Leaves (B9)				Microtopographic I	Relief (D4)		
Aquatic Fauna (B13)				FAC-Neutral Test	(D5)		
Field Observations:							
Surface Water Present? Yes	No X Depth (inch						
Water Table Present? Yes	No X Depth (inch						
Saturation Present? Yes X (includes capillary fringe)	No Depth (inch	es): <u>8</u>	Wetland Hydro	ology Present?	Yes <u>X</u> No		
(includes capillary ininge) Describe Recorded Data (stream gauge, mo	nitoring well aerial photos	nrevious inspe	ctions) if availab				
Remarks:							
Nellains.							

	Absolute	Dominant	Indicator	
<u>Tree Stratum</u> (Plot size: <u>30ft radius</u>)	% Cover	Species?	Status	Dominance Test worksheet:
1. Acer rubrum	5	Yes	FAC	Number of Dominant Species
2. Liquidambar styraciflua	15	Yes	FAC	That Are OBL, FACW, or FAC: 6 (A)
3. Fraxinus pennsylvanica	5	Yes	FACW	Total Number of Dominant
4. Liriodendron tulipifera	5	Yes	FACU	Species Across All Strata: 7 (B)
5.				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 85.7% (A/B)
7.				Prevalence Index worksheet:
	30	=Total Cover		Total % Cover of: Multiply by:
50% of total cover: 15	5 20%	of total cover:	6	OBL species 0 x 1 = 0
Sapling/Shrub Stratum (Plot size: 15ft radius)				FACW species $8 \times 2 = 16$
1. Carpinus caroliniana	5	Yes	FAC	FAC species 54 \times 3 = 162
2. Acer rubrum	5	Yes	FAC	FACU species $12 \times 4 = 48$
3.		165	TAC	
				· <u> </u>
4.		·		Column Totals: 74 (A) 226 (B)
5				Prevalence Index = B/A = 3.05
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				X 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
	10	=Total Cover		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 5	20%	of total cover:	2	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 10 ft radius)				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Microstegium vimineum	20	Yes	FAC	¹ Indicators of hydric soil and wetland hydrology must be
2. Polystichum acrostichoides	5	No	FACU	present, unless disturbed or problematic.
3. Lobelia cardinalis	3	No	FACW	Definitions of Four Vegetation Strata:
4. Carex sp.	1	No		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5. Toxicodendron radicans	3	No	FAC	more in diameter at breast height (DBH), regardless of
6.				height.
7.				Sapling/Shrub – Woody plants, excluding vines, less
8.				than 3 in. DBH and greater than or equal to 3.28 ft
9.				(1 m) tall.
10.				Herb – All herbaceous (non-woody) plants, regardless
11.				of size, and woody plants less than 3.28 ft tall.
· · · ·	32	=Total Cover		Woody Vine – All woody vines greater than 3.28 ft in
50% of total cover: 16		of total cover:	7	height.
Woody Vine Stratum (Plot size: 30 ft radius)	20/0	or total cover.		
	0	Nia	FACU	
1. Lonicera japonica	2	No	FACU	
2. <u>Toxicodendron radicans</u>	1	No	FAC	
3.				
4				
5				Hydrophytic
	3	=Total Cover		Vegetation
50% of total cover: 2	20%	of total cover:	1	Present? Yes X No
Remarks: (Include photo numbers here or on a sepa	rate sheet.)			

Depth	Motrix		Pode				onfirm the ab				
inches)	Matrix Color (moist)	%	Redox Features Color (moist) % Type ¹ Loc ² Texture					Rema	arke		
· · ·				70	Турс				Tterne	aino	
0-2	10YR 3/6	100					Loamy/Cla	уеу			
2-20	10YR 6/2	90	2.5YR 5/8	10	С	Μ	Loamy/Cla	yey Pr	ominent redox	concentrations	
·											
	centration, D=Depl	otion PM	-Roducod Matrix		kad Sana		21		Pore Lining, M	-Motrix	
Hydric Soil In		elion, Rivi	-Reduced Matrix, I	vio-ivias	keu Sano	i Grains.	L			tic Hydric Soil	
Histosol (A			Polyvalue B	elow Sur	face (S8		147, 148)		uck (A10) (ML	-	
	bedon (A2)		Polyvalue Below Surface (S8) (MLRA 1 Thin Dark Surface (S9) (MLRA 147, 144								
Black Histi	. ,		Loamy Mucky Mineral (F1) (MLRA 136)					(MLRA 147, 148)			
	Sulfide (A4)		Loamy Gleyed Matrix (F2) Piedmont Floodplain So						Soils (F19)		
_ · ·	_ayers (A5)		X Depleted Matrix (F3) (MLRA 136, 147)					•			
	k (A10) (LRR N)								rent Material (F21)	
	Below Dark Surface	(A11)								,	
	<pre>Selow Bank Ganade Surface (A12)</pre>	, (, (, 1))							nallow Dark Su		
	cky Mineral (S1)		Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N,						Other (Explain in Remarks)		
	eyed Matrix (S4)		MLRA 13		0000 (1 12	-) (ERRY	•,			iunto)	
Sandy Red				,		122 136	3)	³ Indicators	of hydrophytic	vegetation and	
Stripped N	()	Umbric Surface (F13) (MLRA 122, 136 Piedmont Floodplain Soils (F19) (MLR					•		• • •	•	
Dark Surfa			Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must Red Parent Material (F21) (MLRA 127, 147, 148) unless disturbed or prot								
Restrictive La	yer (if observed):				. ,.				•		
Type:											
	hes):						Hydric Soi	I Present?	Yes X	No	

U.S. Army WETLAND DETERMINATION DATA S See ERDC/EL TR-12-9; th		ains and Piedr	•	Requirement (0710-0024, Exp:11/30 Control Symbol EXEN R 335-15, paragraph 5	IPT:
Project/Site: EPK.001 - 739 Hatley Road		City/Count	y: <u>Pittsboro / Cha</u>	tham	Sampling Date: 9/	15/15
Applicant/Owner: Epkon Hospitality				State: NC	Sampling Point:	TP-6
Investigator(s): Matt Hugo - H&H		Section, Towns	ship, Range:			
Landform (hillside, terrace, etc.): floodplain	terrace Lo	cal relief (conca	ive, convex, none): none	Slope (%):	3
Subregion (LRR or MLRA): LRR P, MLRA 1			Long: 79.07	·	Datum: N	AD 83
Soil Map Unit Name: Nanford-Badin comple				NWI classificat		.2 00
Are climatic / hydrologic conditions on the site		ar?	Yes X N	_	xplain in Remarks.)	
					. ,	
Are Vegetation, Soil, or Hydro				nstances" present?		IO
Are Vegetation, Soil, or Hydro				any answers in Re		
SUMMARY OF FINDINGS – Attach	site map showing s	sampling po	int locations,	transects, im	portant feature	s, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	ls the Sampl within a Wet		Yes X	No	
Remarks: Data point is representative of jurisdictional	wetland areas WAR and W	VAU.				
HYDROLOGY						
Wetland Hydrology Indicators:			Sec	ondary Indicators (minimum of two rec	uired)
Primary Indicators (minimum of one is requi	red; check all that apply)			Surface Soil Crack		
Surface Water (A1)	True Aquatic Plants	(B14)		Sparsely Vegetate	d Concave Surface	(B8)
High Water Table (A2)	Hydrogen Sulfide Od			Drainage Patterns (B10)		
X Saturation (A3)	Oxidized Rhizospher	-	ots (C3)	Moss Trim Lines (
Water Marks (B1)	Presence of Reduce	()	<u> </u>	Dry-Season Water		
Sediment Deposits (B2)	Recent Iron Reduction		s (C6)	Crayfish Burrows (
Drift Deposits (B3) Algal Mat or Crust (B4)	Thin Muck Surface (on Aerial Imagery (.9)
Iron Deposits (B5)	Other (Explain in Re	marks)		Stunted or Stresse Geomorphic Posit		
Inundation Visible on Aerial Imagery (B)	7)			Shallow Aquitard (
X Water-Stained Leaves (B9)				Microtopographic		
Aquatic Fauna (B13)				FAC-Neutral Test		
Field Observations:						
Surface Water Present? Yes	No X Depth (inche	es):				
Water Table Present? Yes	No X Depth (inche	es):				
Saturation Present? Yes X	No Depth (inche	es): <u>8</u>	Wetland Hydro	ology Present?	Yes X N	o
(includes capillary fringe)						
Describe Recorded Data (stream gauge, mo	onitoring well, aerial photos	s, previous inspe	ections), if availab	de:		
Remarks:						

	Absolute	Dominant	Indicator	
<u>Tree Stratum</u> (Plot size: <u>30ft radius</u>)	% Cover	Species?	Status	Dominance Test worksheet:
1. Acer rubrum	5	Yes	FAC	Number of Dominant Species
2. Liquidambar styraciflua	15	Yes	FAC	That Are OBL, FACW, or FAC:6 (A)
3. Fraxinus pennsylvanica	5	Yes	FACW	Total Number of Dominant
4. <u>Liriodendron tulipifera</u>	5	Yes	FACU	Species Across All Strata: 7 (B)
5.				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 85.7% (A/B)
7				Prevalence Index worksheet:
500/ 164-64-1		=Total Cover	•	Total % Cover of: Multiply by:
50% of total cover: 15	20%	of total cover:	6	OBL species 0 x 1 = 0
Sapling/Shrub Stratum (Plot size: 15ft radius)	-	V.		FACW species 8 $x 2 = 16$
1. Carpinus caroliniana	5	Yes	FAC	FAC species 54 x 3 = 162
2. <u>Acer rubrum</u>	5	Yes	FAC	FACU species $12 \times 4 = 48$
3.				UPL species $0 \times 5 = 0$
4				Column Totals: 74 (A) 226 (B)
5				Prevalence Index = B/A = 3.05
6.				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				X 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
		=Total Cover		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 5	20%	of total cover:	2	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 10 ft radius)				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Microstegium vimineum	20	Yes	FAC	¹ Indicators of hydric soil and wetland hydrology must be
2. Polystichum acrostichoides	5	No	FACU	present, unless disturbed or problematic.
3. Lobelia cardinalis	3	No	FACW	Definitions of Four Vegetation Strata:
4. Carex sp.	1	No		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5. Toxicodendron radicans	3	No	FAC	more in diameter at breast height (DBH), regardless of
6				height.
7				Sapling/Shrub – Woody plants, excluding vines, less
8				than 3 in. DBH and greater than or equal to 3.28 ft
9				(1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
	32	=Total Cover		Woody Vine – All woody vines greater than 3.28 ft in
50% of total cover:16	20%	of total cover:	7	height.
Woody Vine Stratum (Plot size: 30 ft radius)				
1. Lonicera japonica	2	No	FACU	
2. Toxicodendron radicans	1	No	FAC	
3				
4				
5				Hydrophytic
		=Total Cover		Vegetation
50% of total cover:2	20%	of total cover:	1	Present? Yes X No
Remarks: (Include photo numbers here or on a separ	rate sheet.)			

Depth	Matrix		Redo	x Featur	200					
inches)	Color (moist)	%	Color (moist)	% r eatur	Type ¹	Loc ²	Texture		Rem	arks
0-2	10YR 3/6	100			.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Loamy/Cla			
0-2	10110 3/0	100				<u> </u>	LUanty/Cla	усу		
2-20	10YR 6/2	90	2.5YR 5/8	10	C	M	Loamy/Cla	yey P	rominent redox	concentrations
					_					
		·			_	·				
 Type: C=C	oncentration, D=Depl	etion, RM	=Reduced Matrix, I	MS=Mas	ked Sand	Grains.	² L	ocation: PL=	Pore Lining, M	=Matrix.
	Indicators:									tic Hydric Soils
Histosol (A1)			Polyvalue B	elow Sur	face (S8) (MLRA '	147, 148)	2 cm M	/luck (A10) (MI	.RA 147)
Histic E	oipedon (A2)		Thin Dark S	urface (S	69) (MLR	A 147, 14	18)	Coast	Prairie Redox	(A16)
Black Hi	istic (A3)		Loamy Muc	ky Minera	al (F1) (N	ILRA 136	5)	(ML	RA 147, 148)	
Hydroge	en Sulfide (A4)		Loamy Gley	oamy Gleyed Matrix (F2)					ont Floodplain	Soils (F19)
Stratified	d Layers (A5)		X Depleted Ma	ted Matrix (F3) (MLRA 13)						
2 cm Mu	uck (A10) (LRR N)		Redox Dark	Surface	(F6)		Red Parent Material (F21)			
Deplete	d Below Dark Surface	e (A11)	Depleted Da	ark Surfa	ce (F7)		(outside MLRA 127, 147, 148)			
Thick Da	ark Surface (A12)		? Redox Depr	pressions (F8)					hallow Dark Su	urface (F22)
Sandy N	/lucky Mineral (S1)		Iron-Mangar	Manganese Masses (F12) (LRR N,					(Explain in Ren	narks)
Sandy G	Gleyed Matrix (S4)		MLRA 13	6)						
Sandy F	Redox (S5)		Umbric Surf	ace (F13	B) (MLRA	122, 136	i)	³ Indicators	of hydrophytic	vegetation and
Stripped	l Matrix (S6)		Piedmont Fl	oodplain	Soils (F	19) (MLR	A 148)	wetlan	d hydrology mu	ust be present,
Dark Su	rface (S7)		Red Parent	Material	(F21) (M	LRA 127,	147, 148)	unless	disturbed or p	roblematic.
Restrictive	Layer (if observed):									
Type:										
Depth (i	nches):						Hydric Soi	I Present?	Yes X	No
Remarks:						•				
Remarks:										

U.S. Arn WETLAND DETERMINATION DATA See ERDC/EL TR-12-9;	n Requirement	:: 0710-0024, Exp:11/30/2024 Control Symbol EXEMPT: R 335-15, paragraph 5-2a)					
Project/Site: EPK.001 - 739 Hatley Road		City/County: Pittsboro /	Chatham	Sampling Date: 9/14/15			
Applicant/Owner: Epkon Hospitality			State: NC	Sampling Point: TP-7			
Investigator(s): Matt Hugo - H&H		Section, Township, Range:					
Landform (hillside, terrace, etc.): hillside	Lo	cal relief (concave, convex,		Slope (%): 5			
Subregion (LRR or MLRA): LRR P, MLRA			9.0734419 W	Datum: NAD 83			
Soil Map Unit Name: Nanford-Badin com		Long. /	NWI classifica				
· · · · · · · · · · · · · · · · · · ·							
Are climatic / hydrologic conditions on the				explain in Remarks.)			
Are Vegetation, Soil, or Hyd			ircumstances" present				
Are Vegetation, Soil, or Hyd	drologynaturally probl	ematic? (If needed, exp	plain any answers in Re	emarks.)			
SUMMARY OF FINDINGS – Attac	ch site map showing s	sampling point location	ons, transects, in	portant features, etc.			
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes No X Yes No X Yes No X	Is the Sampled Area within a Wetland?	Yes	No <u>X</u>			
Data point is representative of jurisdiction	al wetland areas WAD, WAE	ε, WAS, WAT, and WAQ. Μα	ost occupy relict strear	n meanders.			
HYDROLOGY							
Wetland Hydrology Indicators:			Secondary Indicators	(minimum of two required)			
Primary Indicators (minimum of one is rec	uired; check all that apply)		Surface Soil Crac	Surface Soil Cracks (B6)			
Surface Water (A1)	True Aquatic Plants						
High Water Table (A2)	Hydrogen Sulfide Oc		Drainage Patterns (B10)				
Saturation (A3)	Presence of Reduce	res on Living Roots (C3)	Moss Trim Lines				
Water Marks (B1) Sediment Deposits (B2)		on in Tilled Soils (C6)	Dry-Season Wate				
Drift Deposits (B3)	Thin Muck Surface (Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	Other (Explain in Re	,	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				
Field Observations:							
Surface Water Present? Yes	No X Depth (inch						
Water Table Present? Yes	No X Depth (inch						
Saturation Present? Yes	No X Depth (inch	es): Wetland H	Hydrology Present?	Yes No X			
(includes capillary fringe)							
Describe Recorded Data (stream gauge,	monitoring well, aerial protos	s, previous inspections), il av					
Remarks:							

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	Absolute	Dominant	Indicator	
Tree Stratum (Plot size: 30ft radius)	% Cover	Species?	Status	Dominance Test worksheet:
1. Pinus taeda	35	Yes	FAC	Number of Dominant Species
2. Quercus alba	15	Yes	FACU	That Are OBL, FACW, or FAC: 2 (A)
3. Cornus florida	5	No	FACU	
4		·		Total Number of DominantSpecies Across All Strata:6(B)
5.		·		
				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)
7		·		Prevalence Index worksheet:
	55	=Total Cover		Total % Cover of: Multiply by:
50% of total cover: 2	8 20%	6 of total cover:	11	OBL species 0 x 1 = 0
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15ft radius</u>)				FACW species 0 x 2 = 0
1. Ostrya virginiana	5	Yes	FACU	FAC species 39 x 3 = 117
2. Quercus alba	5	Yes	FACU	FACU species 38 x 4 = 152
3.				UPL species $0 \times 5 = 0$
4.		· <u> </u>		Column Totals: 77 (A) 269 (B)
		·		Prevalence Index = $B/A = 3.49$
5.		·		
6				Hydrophytic Vegetation Indicators:
7.				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9.				3 - Prevalence Index is ≤3.0 ¹
	10	=Total Cover		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	5 20%	6 of total cover:	2	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 10 ft radius)				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Microstegium vimineum	3	Yes	FAC	
2. Polystichum acrostichoides	5	Yes	FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				· · · · · · · · · · · · · · · · · · ·
3. Luzula echinata	1	No	FACU	Definitions of Four Vegetation Strata:
4				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5				more in diameter at breast height (DBH), regardless of
6				height.
7.				Sapling/Shrub – Woody plants, excluding vines, less
8.				than 3 in. DBH and greater than or equal to 3.28 ft
9.				(1 m) tall.
10.				Herb – All herbaceous (non-woody) plants, regardless
11.		·		of size, and woody plants less than 3.28 ft tall.
	9	=Total Cover		Woody Vine – All woody vines greater than 3.28 ft in
FOO/ of total action		-	2	height.
	5 20%	of total cover:	2	
<u>Woody Vine Stratum</u> (Plot size: <u>30 ft radius</u>)				
1. Lonicera japonica	2	No	FACU	
2. Toxicodendron radicans	1	No	FAC	
3.				
4.				
5.				
	3	=Total Cover		Hydrophytic Vegetation
50% of total cover: 2		6 of total cover:	1	Present? Yes No X
			<u> </u>	
Remarks: (Include photo numbers here or on a sepa	arate sheet.)			

Depth	Matrix		Redo	x Featu	res						
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks		
0-2	10YR 3/6	100					Loamy/Cla	yey			
2-20	10YR 5/6	100					Loamy/Cla	уеу			
						<u> </u>					
^I Type: C=C	oncentration, D=Dep	letion, RM	=Reduced Matrix, N	//S=Mas	ked Sand	Grains.	² L	ocation: PL=Por	e Lining, M=Matrix.		
Hydric Soil	Indicators:							Indicators for	Problematic Hydric Soils		
Histosol (A1)			Polyvalue B	elow Su	rface (S8)) (MLRA [,]	147, 148)	2 cm Muck (A10) (MLRA 147)			
Histic E	pipedon (A2)		Thin Dark Surface (S9) (MLRA 147, 148) Loamy Mucky Mineral (F1) (MLRA 136) Loamy Gleyed Matrix (F2))Coast Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F19)			
Black Hi	istic (A3)										
Hydroge	en Sulfide (A4)										
Stratified	d Layers (A5)		Depleted Ma	Depleted Matrix (F3)					(MLRA 136, 147)		
2 cm Mu	uck (A10) (LRR N)		Redox Dark	Surface	(F6)			Red Parer	Red Parent Material (F21)		
Deplete	d Below Dark Surface	e (A11)	Depleted Da	irk Surfa	ice (F7)			(outside MLRA 127, 147, 148)			
Thick Da	ark Surface (A12)		Redox Depr	Redox Depressions (F8)					Very Shallow Dark Surface (F22)		
Sandy N	/lucky Mineral (S1)		Iron-Mangar	nese Ma	sses (F12	2) (LRR N	I,	Other (Explain in Remarks)			
Sandy G	Gleyed Matrix (S4)		MLRA 13	6)			(, , , , , , , , , , , , , , , ,				
Sandy F	Redox (S5)		Umbric Surf	ace (F13	B) (MLRA	122, 136	36) ³ Indicators of hydrophytic vegetation and				
Stripped Matrix (S6) Piedmont F				•	<i>,</i> .		-		drology must be present,		
Dark Su	rface (S7)		Red Parent	Material	(F21) (M	LRA 127,	147, 148)	unless dist	turbed or problematic.		
Restrictive	Layer (if observed):										
Type:											
Depth (i	nches):						Hydric Soi	I Present?	Yes No X		

U.S. Arr WETLAND DETERMINATION DATA See ERDC/EL TR-12-9;		ains and Piedmont Region	OMB Control #: 0710-0024, Exp:11/30 Requirement Control Symbol EXEN (Authority: AR 335-15, paragraph 5	NPT:
Project/Site: EPK.001 - 739 Hatley Road		City/County: Pittsboro / Cha	athamSampling Date: _9/	/12/15
Applicant/Owner: Epkon Hospitality			State: NC Sampling Point:	TP-8
Investigator(s): Matt Hugo - H&H		Section, Township, Range:		
Landform (hillside, terrace, etc.): hillside	Lo	ocal relief (concave, convex, none	e): convex Slope (%):	5
Subregion (LRR or MLRA): LRR P, MLRA	A 136 Lat: 35.7509046 N	Long: 79.07	734419 W Datum: N	AD 83
Soil Map Unit Name: Nanford-Badin com		0	NWI classification: None	
Are climatic / hydrologic conditions on the		ear? Yes X N	No (If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrolegie conditione on the			mstances" present? Yes X N	
				10 <u> </u>
Are Vegetation, Soil, or Hyd			any answers in Remarks.)	
SUMMARY OF FINDINGS – Atta	ch site map showing	sampling point locations	s, transects, important feature	s, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes No X Yes No X Yes No X	Is the Sampled Area within a Wetland?	Yes No X	
Remarks: Data point is representative of jurisdiction	al wetland areas WAD, WAI	E, WAS, WAT, and WAQ. Most o	occupy relict stream meanders.	
HYDROLOGY				
Wetland Hydrology Indicators: Primary Indicators (minimum of one is red Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, Remarks:	True Aquatic Plants Hydrogen Sulfide O Oxidized Rhizosphe Presence of Reduct Recent Iron Reducti Thin Muck Surface Other (Explain in Re (B7) NoXDepth (inch NoXDepth (inch NoXDepth (inch	(B14) dor (C1) eres on Living Roots (C3) ed Iron (C4) ion in Tilled Soils (C6) (C7) emarks) mes): hes): Wetland Hydr		e (B8)

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	Absolute	Dominant	Indicator	
<u>Tree Stratum</u> (Plot size: <u>30ft radius</u>)	% Cover	Species?	Status	Dominance Test worksheet:
1. <i>Pinus taeda</i>	35	Yes	FAC	Number of Dominant Species
2. Quercus falcata	15	Yes	FACU	That Are OBL, FACW, or FAC: 2 (A)
3. Cornus florida	5	No	FACU	Total Number of Dominant
4.				Species Across All Strata: 6 (B)
5				Percent of Dominant Species
6				That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)
7				Prevalence Index worksheet:
	55	=Total Cover		Total % Cover of: Multiply by:
50% of total cover: 2	8 20%	of total cover:	11	OBL species 0 x 1 = 0
<u>Sapling/Shrub Stratum</u> (Plot size: 15ft radius)				FACW species 0 x 2 = 0
1. Ostrya virginiana	5	Yes	FACU	FAC species 39 x 3 = 117
2. Quercus alba	5	Yes	FACU	FACU species 38 x 4 = 152
3.				UPL species 0 x 5 = 0
4.				Column Totals: 77 (A) 269 (B)
5.				Prevalence Index = $B/A = 3.49$
6.		· · · · · · · · · · · · · · · · · · ·		Hydrophytic Vegetation Indicators:
7.				
				1 - Rapid Test for Hydrophytic Vegetation
8.				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
	10	=Total Cover		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 5	5 20%	of total cover:	2	data in Remarks or on a separate sheet)
<u>Herb Stratum</u> (Plot size: <u>10 ft radius</u>)				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Microstegium vimineum	3	Yes	FAC	¹ Indicators of hydric soil and wetland hydrology must be
2. Polystichum acrostichoides	5	Yes	FACU	present, unless disturbed or problematic.
3. Luzula echinata	1	No	FACU	Definitions of Four Vegetation Strata:
4.				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5.				more in diameter at breast height (DBH), regardless of
6.				height.
7.		·		Sapling/Shrub – Woody plants, excluding vines, less
8.				than 3 in. DBH and greater than or equal to 3.28 ft
9.				(1 m) tall.
10		·		Herb – All herbaceous (non-woody) plants, regardless
				of size, and woody plants less than 3.28 ft tall.
11		Tatal Quart		
	9	=Total Cover		Woody Vine – All woody vines greater than 3.28 ft in height.
50% of total cover: 5	20%	of total cover:	2	
<u>Woody Vine Stratum</u> (Plot size: <u>30 ft radius</u>)				
1. Lonicera japonica	2	No	FACU	
2. Toxicodendron radicans	1	No	FAC	
3				
4.				
5				Hydrophytic
	3	=Total Cover		Vegetation
50% of total cover: 2	2 20%	of total cover:	1	Present? Yes No X
Demorker (Include nhete numbers here er en e sons	rate aboat)			
Remarks: (Include photo numbers here or on a sepa	irate sneet.)			

Depth	Matrix		Redo	x Featu	res					
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-4	10YR 3/6	100					Loamy/Clay	уеу		
4-20	10YR 4/6	100					Loamy/Clay	yey		
		·				·				
		·				·				
Type: C=C	oncentration, D=Dep	letion, RM	=Reduced Matrix, N	//S=Mas	ked Sanc	Grains.	² Lo	ocation: PL=Pore Lining, M=Matrix.		
Hydric Soil	Indicators:							Indicators for Problematic Hydric So		
Histosol (A1)			Polyvalue B	elow Su	rface (S8)) (MLRA ′	147, 148)	2 cm Muck (A10) (MLRA 147)		
Histic Ep	oipedon (A2)		Thin Dark Surface (S9) (MLRA 147, 148) Loamy Mucky Mineral (F1) (MLRA 136) Loamy Gleyed Matrix (F2)					Coast Prairie Redox (A16)		
Black Hi	istic (A3)							(MLRA 147, 148) Piedmont Floodplain Soils (F19)		
Hydroge	en Sulfide (A4)									
Stratified	d Layers (A5)		Depleted Ma	atrix (F3))			(MLRA 136, 147) Red Parent Material (F21)		
2 cm Mu	uck (A10) (LRR N)		Redox Dark	Surface	(F6)					
Depleted	d Below Dark Surface	e (A11)	Depleted Da	irk Surfa	ice (F7)			(outside MLRA 127, 147, 148)		
Thick Da	ark Surface (A12)		Redox Depr	essions	(F8)		Very Shallow Dark Surface (F22)			
Sandy M	/lucky Mineral (S1)		Iron-Mangar	nese Ma	sses (F12	2) (LRR N	l,	Other (Explain in Remarks)		
Sandy G	Gleyed Matrix (S4)		MLRA 13	6)						
Sandy F	Redox (S5)		Umbric Surf	ace (F13	B) (MLRA	122, 136)	³ Indicators of hydrophytic vegetation ar		
Stripped Matrix (S6) Piedmont Flo				oodplair	n Soils (F	19) (MLR	A 148)	wetland hydrology must be present		
Dark Su	rface (S7)		Red Parent	Material	(F21) (M	LRA 127,	147, 148)	unless disturbed or problematic.		
	Layer (if observed):									
Type:										
Depth (inches):						Hydric Soil	I Present? Yes No X			

U.S. Arm WETLAND DETERMINATION DATA See ERDC/EL TR-12-9;	Requirement	: 0710-0024, Exp:11/30/2024 Control Symbol EXEMPT: R 335-15, paragraph 5-2a)					
Project/Site: EPK.001 - 739 Hatley Road		City/County: Pittsboro /	Chatham	Sampling Date: 9/13/15			
Applicant/Owner: Epkon Hospitality			State: NC	Sampling Point: TP-9			
Investigator(s): Matt Hugo - H&H		Section, Township, Range:					
Landform (hillside, terrace, etc.): hillside	Lo	cal relief (concave, convex, n	one): convex	Slope (%): 5			
Subregion (LRR or MLRA): LRR P, MLRA		·	9.0734419 W	Datum: NAD 83			
Soil Map Unit Name: Nanford-Badin comp		Long	NWI classifica				
· · · · ·							
Are climatic / hydrologic conditions on the s				explain in Remarks.)			
Are Vegetation, Soil, or Hyd			rcumstances" present				
Are Vegetation, Soil, or Hyd	rologynaturally probl	ematic? (If needed, expl	lain any answers in Re	emarks.)			
SUMMARY OF FINDINGS – Attac	h site map showing s	sampling point locatio	ons, transects, in	portant features, etc.			
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes No X Yes No X Yes No X	Is the Sampled Area within a Wetland?	Yes	No_X			
Data point is representative of jurisdictiona	al wetland areas WAD, WAE	E, WAS, WAT, and WAQ. Mo	st occupy relict strear	n meanders.			
HYDROLOGY							
Wetland Hydrology Indicators:			Secondary Indicators	(minimum of two required)			
Primary Indicators (minimum of one is req	uired; check all that apply)		Surface Soil Cracks (B6)				
Surface Water (A1)	True Aquatic Plants		B14) Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2)	Hydrogen Sulfide Oc		Drainage Patterns (B10)				
Saturation (A3)	Presence of Reduce	res on Living Roots (C3)	Moss Trim Lines				
Water Marks (B1) Sediment Deposits (B2)		on in Tilled Soils (C6)	Dry-Season Wate				
Drift Deposits (B3)	Thin Muck Surface (Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	Other (Explain in Re	,	Stunted or Stressed Plants (D1)				
Iron Deposits (B5)			Geomorphic Position (D2)				
Inundation Visible on Aerial Imagery (B7)	•	 Shallow Aquitard				
Water-Stained Leaves (B9)	,	•	Microtopographic	Relief (D4)			
Aquatic Fauna (B13)			FAC-Neutral Tes				
Field Observations:							
Surface Water Present? Yes	No X Depth (inch						
Water Table Present? Yes	No X Depth (inch						
Saturation Present? Yes	No X Depth (inch	es): Wetland H	ydrology Present?	Yes <u>No X</u>			
(includes capillary fringe)		inti) if	-il-bla.				
Describe Recorded Data (stream gauge, r	nonitoning well, aenai priotos	s, previous inspections), il ava					
Remarks:							

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	Absolute	Dominant	Indicator	
Tree Stratum (Plot size: 30ft radius)	% Cover	Species?	Status	Dominance Test worksheet:
1. Pinus taeda	35	Yes	FAC	Number of Dominant Species
2. Quercus alba	15	Yes	FACU	That Are OBL, FACW, or FAC: 2 (A)
3. Cornus florida	5	No	FACU	
4		·		Total Number of DominantSpecies Across All Strata:6(B)
5.		·		
				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)
7		·		Prevalence Index worksheet:
	55	=Total Cover		Total % Cover of: Multiply by:
50% of total cover: 2	8 20%	6 of total cover:	11	OBL species 0 x 1 = 0
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15ft radius</u>)				FACW species 0 x 2 = 0
1. Ostrya virginiana	5	Yes	FACU	FAC species 39 x 3 = 117
2. Quercus alba	5	Yes	FACU	FACU species 38 x 4 = 152
3.				UPL species $0 \times 5 = 0$
4.		· <u> </u>		Column Totals: 77 (A) 269 (B)
		·		Prevalence Index = $B/A = 3.49$
5.		·		
6				Hydrophytic Vegetation Indicators:
7.				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9.				3 - Prevalence Index is ≤3.0 ¹
	10	=Total Cover		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	5 20%	6 of total cover:	2	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 10 ft radius)				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Microstegium vimineum	3	Yes	FAC	
2. Polystichum acrostichoides	5	Yes	FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				· · · · · · · · · · · · · · · · · · ·
3. Luzula echinata	1	No	FACU	Definitions of Four Vegetation Strata:
4				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5				more in diameter at breast height (DBH), regardless of
6				height.
7.				Sapling/Shrub – Woody plants, excluding vines, less
8.				than 3 in. DBH and greater than or equal to 3.28 ft
9.				(1 m) tall.
10.				Herb – All herbaceous (non-woody) plants, regardless
11.		·		of size, and woody plants less than 3.28 ft tall.
	9	=Total Cover		Woody Vine – All woody vines greater than 3.28 ft in
FOO/ of total action		-	2	height.
	5 20%	of total cover:	2	
<u>Woody Vine Stratum</u> (Plot size: <u>30 ft radius</u>)				
1. Lonicera japonica	2	No	FACU	
2. Toxicodendron radicans	1	No	FAC	
3.				
4.				
5.				
	3	=Total Cover		Hydrophytic Vegetation
50% of total cover: 2		6 of total cover:	1	Present? Yes No X
			<u> </u>	
Remarks: (Include photo numbers here or on a sepa	arate sheet.)			

Depth	Matrix		Redo	x Featu	res						
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks		
0-2	10YR 3/6	100					Loamy/Cla	yey			
2-20	10YR 5/6	100					Loamy/Cla	уеу			
						<u> </u>					
^I Type: C=C	oncentration, D=Dep	letion, RM	=Reduced Matrix, N	//S=Mas	ked Sand	Grains.	² L	ocation: PL=Por	e Lining, M=Matrix.		
Hydric Soil	Indicators:							Indicators for	Problematic Hydric Soils		
Histosol (A1)			Polyvalue B	elow Su	rface (S8)) (MLRA [,]	147, 148)	2 cm Muck (A10) (MLRA 147)			
Histic E	pipedon (A2)		Thin Dark Surface (S9) (MLRA 147, 148) Loamy Mucky Mineral (F1) (MLRA 136) Loamy Gleyed Matrix (F2))Coast Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F19)			
Black Hi	istic (A3)										
Hydroge	en Sulfide (A4)										
Stratified	d Layers (A5)		Depleted Ma	Depleted Matrix (F3)					(MLRA 136, 147)		
2 cm Mu	uck (A10) (LRR N)		Redox Dark	Surface	(F6)			Red Parer	Red Parent Material (F21)		
Deplete	d Below Dark Surface	e (A11)	Depleted Da	irk Surfa	ice (F7)			(outside MLRA 127, 147, 148)			
Thick Da	ark Surface (A12)		Redox Depr	Redox Depressions (F8)					Very Shallow Dark Surface (F22)		
Sandy N	/lucky Mineral (S1)		Iron-Mangar	nese Ma	sses (F12	2) (LRR N	I,	Other (Explain in Remarks)			
Sandy G	Gleyed Matrix (S4)		MLRA 13	6)			(, , , , , , , , , , , , , , , ,				
Sandy F	Redox (S5)		Umbric Surf	ace (F13	B) (MLRA	122, 136	36) ³ Indicators of hydrophytic vegetation and				
Stripped Matrix (S6) Piedmont F				•	<i>,</i> .		-		drology must be present,		
Dark Su	rface (S7)		Red Parent	Material	(F21) (M	LRA 127,	147, 148)	unless dist	turbed or problematic.		
Restrictive	Layer (if observed):										
Type:											
Depth (i	nches):						Hydric Soi	I Present?	Yes No X		

U.S. Arm WETLAND DETERMINATION DATA See ERDC/EL TR-12-9;	n Requirement	: 0710-0024, Exp:11/30/2024 Control Symbol EXEMPT: R 335-15, paragraph 5-2a)					
Project/Site: EPK.001 - 739 Hatley Road		City/County: Pittsboro /	Chatham	Sampling Date: 9/14/15			
Applicant/Owner: Epkon Hospitality			State: NC	Sampling Point: TP-10			
Investigator(s): Matt Hugo - H&H		Section, Township, Range:					
Landform (hillside, terrace, etc.): hillside	Lo	cal relief (concave, convex,		Slope (%): 5			
Subregion (LRR or MLRA): LRR P, MLRA			9.0734419 W	Datum: NAD 83			
		Long. 7	NWI classifica				
Soil Map Unit Name: Nanford-Badin comp		2 1 1					
Are climatic / hydrologic conditions on the s				explain in Remarks.)			
Are Vegetation, Soil, or Hyd	rologysignificantly di	sturbed? Are "Normal C	ircumstances" present	? Yes X No			
Are Vegetation, Soil, or Hyd	rology naturally probl	ematic? (If needed, exp	plain any answers in Re	emarks.)			
SUMMARY OF FINDINGS – Attac	h site map showing s	sampling point location	ons, transects, im	portant features, etc.			
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes No X Yes No X Yes No X Yes No X	Is the Sampled Area within a Wetland?	Yes	No_X			
Remarks: Data point is representative of jurisdictiona	al wetland areas WAD, WAE	, WAS, WAT, and WAQ. Mo	ost occupy relict strean	n meanders.			
HYDROLOGY							
Wetland Hydrology Indicators:			Secondary Indicators	(minimum of two required)			
Primary Indicators (minimum of one is requ	uired; check all that apply)		Surface Soil Cracks (B6)				
Surface Water (A1)	True Aquatic Plants	(B14) Sparsely Vegetated Concave Surface (B8)					
High Water Table (A2)	Hydrogen Sulfide Oc		Drainage Patterns (B10)				
Saturation (A3)	·	res on Living Roots (C3)	Moss Trim Lines				
Water Marks (B1) Sediment Deposits (B2)	Presence of Reduce		Dry-Season Wate				
Drift Deposits (B3)	Thin Muck Surface (on in Tilled Soils (C6)	Crayfish Burrows				
Algal Mat or Crust (B4)	Other (Explain in Re	,	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)				
Iron Deposits (B5)		indiko)	Geomorphic Position (D2)				
Inundation Visible on Aerial Imagery (I	B7)		Shallow Aquitard (D3)				
Water-Stained Leaves (B9)	/		Microtopographic				
Aquatic Fauna (B13)			FAC-Neutral Test				
Field Observations:							
Surface Water Present? Yes	No X Depth (inch	es):					
Water Table Present? Yes	No X Depth (inch	es):					
Saturation Present? Yes	No X Depth (inch	es): Wetland I	Hydrology Present?	Yes No X			
(includes capillary fringe)							
Describe Recorded Data (stream gauge, n	nonitoring well, aerial photos	s, previous inspections), if av	vailable:				
Remarks:							

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	Absolute	Dominant	Indicator	
Tree Stratum (Plot size: 30ft radius)	% Cover	Species?	Status	Dominance Test worksheet:
1. Pinus taeda	35	Yes	FAC	Number of Dominant Species
2. Quercus alba	15	Yes	FACU	That Are OBL, FACW, or FAC: 2 (A)
3. Cornus florida	5	No	FACU	
4		·		Total Number of DominantSpecies Across All Strata:6(B)
5.		·		
				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)
7		·		Prevalence Index worksheet:
	55	=Total Cover		Total % Cover of: Multiply by:
50% of total cover: 2	8 20%	6 of total cover:	11	OBL species 0 x 1 = 0
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15ft radius</u>)				FACW species 0 x 2 = 0
1. Ostrya virginiana	5	Yes	FACU	FAC species 39 x 3 = 117
2. Quercus alba	5	Yes	FACU	FACU species 38 x 4 = 152
3.				UPL species $0 \times 5 = 0$
4.		· <u> </u>		Column Totals: 77 (A) 269 (B)
		·		Prevalence Index = $B/A = 3.49$
5.		·		
6				Hydrophytic Vegetation Indicators:
7.				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9.				3 - Prevalence Index is ≤3.0 ¹
	10	=Total Cover		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	5 20%	6 of total cover:	2	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 10 ft radius)				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Microstegium vimineum	3	Yes	FAC	
2. Polystichum acrostichoides	5	Yes	FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				· · · · · · · · · · · · · · · · · · ·
3. Luzula echinata	1	No	FACU	Definitions of Four Vegetation Strata:
4				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5				more in diameter at breast height (DBH), regardless of
6				height.
7.				Sapling/Shrub – Woody plants, excluding vines, less
8.				than 3 in. DBH and greater than or equal to 3.28 ft
9.				(1 m) tall.
10.				Herb – All herbaceous (non-woody) plants, regardless
11.		·		of size, and woody plants less than 3.28 ft tall.
	9	=Total Cover		Woody Vine – All woody vines greater than 3.28 ft in
FOO/ of total action		-	2	height.
	5 20%	of total cover:	2	
<u>Woody Vine Stratum</u> (Plot size: <u>30 ft radius</u>)				
1. Lonicera japonica	2	No	FACU	
2. Toxicodendron radicans	1	No	FAC	
3.				
4.				
5.				
	3	=Total Cover		Hydrophytic Vegetation
50% of total cover: 2		6 of total cover:	1	Present? Yes No X
			<u> </u>	
Remarks: (Include photo numbers here or on a sepa	arate sheet.)			

Depth	Matrix	Redo	x Featu	res					
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks
0-2	10YR 3/6	100					Loamy/Cla	yey	
2-20	10YR 5/6	100					Loamy/Cla	vev	
		_		_	_		,		
						·			
	oncentration, D=Dep	letion, RM	=Reduced Matrix, I	//S=Mas	ked Sanc	Grains.	² L	ocation: PL=Pore I	-
-	Indicators:								roblematic Hydric Soils
Histosol	(A1)		Polyvalue B		• •			·	A10) (MLRA 147)
Histic E	pipedon (A2)		Thin Dark S	urface (S	59) (MLR	A 147, 14	18)	Coast Prairie	e Redox (A16)
Black Hi	istic (A3)		Loamy Muc	ky Miner	al (F1) (₩	ILRA 136	5)	(MLRA 147	7, 148)
Hydroge	en Sulfide (A4)		Loamy Gley	ed Matri	x (F2)			Piedmont Flo	oodplain Soils (F19)
Stratified	d Layers (A5)		Depleted Ma	atrix (F3))			(MLRA 136	ծ, 147)
2 cm Mı	uck (A10) (LRR N)		Redox Dark	Surface	(F6)			Red Parent M	Material (F21)
Deplete	d Below Dark Surface	e (A11)	Depleted Da	irk Surfa	ice (F7)			(outside N	ILRA 127, 147, 148)
Thick Da	ark Surface (A12)		Redox Depr	essions	(F8)			Very Shallow	/ Dark Surface (F22)
Sandy N	/lucky Mineral (S1)		Iron-Mangar	nese Ma	sses (F12	2) (LRR N	l,	Other (Explai	in in Remarks)
Sandy G	Gleyed Matrix (S4)		MLRA 13	6)					
Sandy F	Redox (S5)		Umbric Surf	ace (F13	B) (MLRA	122, 136	5)	³ Indicators of hyd	Irophytic vegetation and
Stripped	l Matrix (S6)		Piedmont Fl	oodplair	n Soils (F	19) (MLR	A 148)	wetland hydr	ology must be present,
Dark Su	rface (S7)		Red Parent	Material	(F21) (M	LRA 127,	147, 148)	unless distur	bed or problematic.
	Layer (if observed):								
Type:									
Depth (i	nches):						Hydric Soi	I Present?	res NoX

U.S. Ari WETLAND DETERMINATION DATA See ERDC/EL TR-12-9		ntains and Piedmont Region	OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)			
Project/Site: EPK.001 - 739 Hatley Road	1	City/County: Pittsboro / Ch	atham Sampling Date: 9/15/15			
Applicant/Owner: Epkon Hospitality			State: NC Sampling Point: TP-11			
Investigator(s): Matt Hugo - H&H		Section, Township, Range:				
Landform (hillside, terrace, etc.): hillside	1	Local relief (concave, convex, non	e): convex Slope (%): 10			
Subregion (LRR or MLRA): LRR P, MLR		·				
Soil Map Unit Name: Georgville silt loam		Long	NWI classification: None			
		Ver V				
Are climatic / hydrologic conditions on the			No(If no, explain in Remarks.)			
Are Vegetation, Soil, or Hy			mstances" present? Yes X No			
Are Vegetation, Soil, or Hy	drologynaturally pro	blematic? (If needed, explain	any answers in Remarks.)			
SUMMARY OF FINDINGS – Atta	ch site map showing	sampling point locations	s, transects, important features, etc.			
Hydrophytic Vegetation Present? Hydric Soil Present?	Yes No X Yes No X	Is the Sampled Area within a Wetland?	Yes NoX			
Wetland Hydrology Present?	Yes <u>No X</u>					
HYDROLOGY						
Wetland Hydrology Indicators:		<u>Se</u>	condary Indicators (minimum of two required)			
Primary Indicators (minimum of one is re	quired; check all that apply)	_Surface Soil Cracks (B6)			
Surface Water (A1)	True Aquatic Plan	. ,	Sparsely Vegetated Concave Surface (B8)			
High Water Table (A2)	Hydrogen Sulfide		Drainage Patterns (B10)			
Saturation (A3)	·	eres on Living Roots (C3) Moss Trim Lines (B16)				
Water Marks (B1) Sediment Deposits (B2)	Presence of Redu	ction in Tilled Soils (C6)	Dry-Season Water Table (C2) Crayfish Burrows (C8)			
Drift Deposits (B3)	Thin Muck Surface		Saturation Visible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)	Other (Explain in F		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		ches):				
Water Table Present? Yes		ches):				
Saturation Present? Yes	No <u>X</u> Depth (in	ches): Wetland Hyd	rology Present? Yes <u>No X</u>			
(includes capillary fringe) Describe Recorded Data (stream gauge,	monitoring wall parial pho	too provious inspections) if availa	blo			
Describe Recorded Data (Stream gauge,	monitoring weil, aenai prio	us, previous inspections), ir availa	DIE.			
Remarks:						

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	Absolute	Dominant	Indicator	
Tree Stratum (Plot size: 30ft radius)	% Cover	Species?	Status	Dominance Test worksheet:
1. Pinus taeda	35	Yes	FAC	Number of Dominant Species
2. Quercus alba	15	Yes	FACU	That Are OBL, FACW, or FAC: 2 (A)
3. Cornus florida	5	No	FACU	
4				Total Number of DominantSpecies Across All Strata:6(B)
5.		·		
				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)
7				Prevalence Index worksheet:
	55	=Total Cover		Total % Cover of: Multiply by:
50% of total cover: 2	8 20%	of total cover:	11	OBL species 0 x 1 = 0
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15ft radius</u>)				FACW species 0 x 2 = 0
1. Ostrya virginiana	5	Yes	FACU	FAC species 39 x 3 = 117
2. Quercus alba	5	Yes	FACU	FACU species 38 x 4 = 152
3.				UPL species $0 \times 5 = 0$
4.		· <u></u>		Column Totals: 77 (A) 269 (B)
		·		Prevalence Index = $B/A = 3.49$
5.				
6				Hydrophytic Vegetation Indicators:
7.				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9.				3 - Prevalence Index is ≤3.0 ¹
	10	=Total Cover		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	5 20%	of total cover:	2	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 10 ft radius)				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Microstegium vimineum	3	Yes	FAC	
2. Polystichum acrostichoides	5	Yes	FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				· · · · · · · · · · · · · · · · · · ·
3. Luzula echinata	1	No	FACU	Definitions of Four Vegetation Strata:
4				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5				more in diameter at breast height (DBH), regardless of
6				height.
7.				Sapling/Shrub – Woody plants, excluding vines, less
8.				than 3 in. DBH and greater than or equal to 3.28 ft
9.				(1 m) tall.
10.				Herb – All herbaceous (non-woody) plants, regardless
11.		·		of size, and woody plants less than 3.28 ft tall.
	9	=Total Cover		Woody Vine – All woody vines greater than 3.28 ft in
FOO/ of total action		•	2	height.
	5 20%	of total cover:	2	
<u>Woody Vine Stratum</u> (Plot size: <u>30 ft radius</u>)				
1. Lonicera japonica	2	No	FACU	
2. Toxicodendron radicans	1	No	FAC	
3.				
4.				
5.				
	3	=Total Cover		Hydrophytic Vegetation
50% of total cover: 2		of total cover:	1	Present? Yes No X
			<u> </u>	
Remarks: (Include photo numbers here or on a sepa	arate sheet.)			

Depth	Matrix	Redo	x Featu	res				
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	10YR 4/4	100					Loamy/Clay	уеу
4-20	10YR 5/6	100					Loamy/Clay	vev
					_	·		
		·				·		
	oncentration, D=Dep	letion, RM	=Reduced Matrix, N	//S=Mas	ked Sand	d Grains.	² Lo	ocation: PL=Pore Lining, M=Matrix.
Hydric Soil								Indicators for Problematic Hydric So
Histosol			Polyvalue B					2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Thin Dark S	•			•	Coast Prairie Redox (A16)
	istic (A3)		Loamy Mucl	-		ILRA 136)	(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gley		` '			Piedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Ma	• • •				(MLRA 136, 147)
	uck (A10) (LRR N)		Redox Dark		· · /			Red Parent Material (F21)
	d Below Dark Surface	e (A11)	Depleted Da		. ,			(outside MLRA 127, 147, 148)
	ark Surface (A12)		Redox Depr					Very Shallow Dark Surface (F22)
	lucky Mineral (S1)		Iron-Mangar		sses (F12	2) (LRR N	l,	Other (Explain in Remarks)
	Gleyed Matrix (S4)		MLRA 13	,				3
	Redox (S5)		Umbric Surf	•	<i>,</i> .			³ Indicators of hydrophytic vegetation an
	l Matrix (S6)		Piedmont FI	•	•	, .	•	wetland hydrology must be present
Dark Su	rface (S7)		Red Parent	Material	(F21) (M	LRA 127,	147, 148)	unless disturbed or problematic.
Restrictive	Layer (if observed):							
Type:								
Depth (ii	nches):						Hydric Soil	I Present? Yes No X

U.S. Arn WETLAND DETERMINATION DATA See ERDC/EL TR-12-9;		ains and Piedmont Region	Requirement Contr	0-0024, Exp:11/30/2024 rol Symbol EXEMPT: i-15, paragraph 5-2a)		
Project/Site: EPK.001 - 739 Hatley Road		City/County: Pittsboro /	Chatham Sar	mpling Date: <u>9/12/15</u>		
Applicant/Owner: Epkon Hospitality			State: NC Sar	mpling Point: TP-12		
Investigator(s): Matt Hugo - H&H		Section, Township, Range:				
Landform (hillside, terrace, etc.): hillside	Lo	ocal relief (concave, convex, n	one): convex	Slope (%): 5		
Subregion (LRR or MLRA): LRR P, MLRA	136 Lat: 35.7509046 N	Lona: 79	.0734419 W	Datum: NAD 83		
Soil Map Unit Name: Nanford-Badin com			NWI classification:			
Are climatic / hydrologic conditions on the		vor? Voo V				
			、 、	in in Remarks.)		
Are Vegetation, Soil, or Hyd			cumstances" present?	Yes X No		
Are Vegetation, Soil, or Hyd	Irologynaturally prob	lematic? (If needed, expl	ain any answers in Remark	(S.)		
SUMMARY OF FINDINGS – Attac	ch site map showing	sampling point locatio	ns, transects, impor	tant features, etc.		
Hydrophytic Vegetation Present?	Yes No X	Is the Sampled Area				
Hydric Soil Present?	Yes No X	within a Wetland?	Yes No	X		
Wetland Hydrology Present?	Yes No X					
Data point is representative of jurisdiction	al wetland areas WAD, WAE	-, WAS, WAT, and WAQ. Μο	st occupy relict stream mea	anders.		
HYDROLOGY						
Wetland Hydrology Indicators:			Secondary Indicators (mini	mum of two required)		
Primary Indicators (minimum of one is rec	uired; check all that apply)		Surface Soil Cracks (B	6)		
Surface Water (A1)	True Aquatic Plants	(B14)	Sparsely Vegetated Concave Surface (B8)			
High Water Table (A2)	Hydrogen Sulfide Oo	· · · · · · · · · · · · · · · · · · ·				
Saturation (A3)		res on Living Roots (C3) Moss Trim Lines (B16)				
Water Marks (B1)	Presence of Reduce	•	Dry-Season Water Table (C2)			
Sediment Deposits (B2)		on in Tilled Soils (C6)	Crayfish Burrows (C8)			
Drift Deposits (B3)	Thin Muck Surface (· /	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)			
Algal Mat or Crust (B4) Iron Deposits (B5)	Other (Explain in Re		Geomorphic Position (D2)			
Inundation Visible on Aerial Imagery	B7)	-	02)			
Water-Stained Leaves (B9)		-	Shallow Aquitard (D3) Microtopographic Relie	ef (D4)		
Aquatic Fauna (B13)		•	FAC-Neutral Test (D5)			
Field Observations:						
Surface Water Present? Yes	No X Depth (inch	nes):				
Water Table Present? Yes	No X Depth (inch	nes):				
Saturation Present? Yes	No X Depth (inch	wes): Wetland H	ydrology Present?	Yes <u>No X</u>		
(includes capillary fringe)						
Describe Recorded Data (stream gauge,	monitoring well, aerial photo:	s, previous inspections), if ava	allable:			
Remarks:						

٦

	Absolute	Dominant	Indicator	
Tree Stratum (Plot size: 30ft radius)	% Cover	Species?	Status	Dominance Test worksheet:
1. Pinus taeda	35	Yes	FAC	Number of Dominant Species
2. Quercus alba	15	Yes	FACU	That Are OBL, FACW, or FAC: 2 (A)
3. Cornus florida	5	No	FACU	
4				Total Number of DominantSpecies Across All Strata:6(B)
5.		·		
				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)
7				Prevalence Index worksheet:
	55	=Total Cover		Total % Cover of: Multiply by:
50% of total cover: 2	8 20%	of total cover:	11	OBL species 0 x 1 = 0
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15ft radius</u>)				FACW species 0 x 2 = 0
1. Ostrya virginiana	5	Yes	FACU	FAC species 39 x 3 = 117
2. Quercus alba	5	Yes	FACU	FACU species 38 x 4 = 152
3.				UPL species $0 \times 5 = 0$
4.		· <u></u>		Column Totals: 77 (A) 269 (B)
		·		Prevalence Index = $B/A = 3.49$
5.				
6				Hydrophytic Vegetation Indicators:
7.				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9.				3 - Prevalence Index is ≤3.0 ¹
	10	=Total Cover		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	5 20%	of total cover:	2	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 10 ft radius)				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Microstegium vimineum	3	Yes	FAC	
2. Polystichum acrostichoides	5	Yes	FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				· · · · · · · · · · · · · · · · · · ·
3. Luzula echinata	1	No	FACU	Definitions of Four Vegetation Strata:
4				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5				more in diameter at breast height (DBH), regardless of
6				height.
7.				Sapling/Shrub – Woody plants, excluding vines, less
8.				than 3 in. DBH and greater than or equal to 3.28 ft
9.				(1 m) tall.
10.				Herb – All herbaceous (non-woody) plants, regardless
11.		·		of size, and woody plants less than 3.28 ft tall.
	9	=Total Cover		Woody Vine – All woody vines greater than 3.28 ft in
FOO/ of total action		•	2	height.
	5 20%	of total cover:	2	
<u>Woody Vine Stratum</u> (Plot size: <u>30 ft radius</u>)				
1. Lonicera japonica	2	No	FACU	
2. Toxicodendron radicans	1	No	FAC	
3.				
4.				
5.				
	3	=Total Cover		Hydrophytic Vegetation
50% of total cover: 2		of total cover:	1	Present? Yes No X
			<u> </u>	
Remarks: (Include photo numbers here or on a sepa	arate sheet.)			

Depth	Matrix	Redo	x Featu	res					
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks
0-2	10YR 3/6	100					Loamy/Cla	yey	
2-20	10YR 5/6	100					Loamy/Cla	vev	
		_		_	_		,		
						·			
	oncentration, D=Dep	letion, RM	=Reduced Matrix, I	//S=Mas	ked Sanc	Grains.	² L	ocation: PL=Pore I	-
-	Indicators:								roblematic Hydric Soils
Histosol	(A1)		Polyvalue B		• •			·	A10) (MLRA 147)
Histic E	pipedon (A2)		Thin Dark S	urface (S	59) (MLR	A 147, 14	18)	Coast Prairie	e Redox (A16)
Black Hi	istic (A3)		Loamy Muc	ky Miner	al (F1) (₩	ILRA 136	5)	(MLRA 147	7, 148)
Hydroge	en Sulfide (A4)		Loamy Gley	ed Matri	x (F2)			Piedmont Flo	oodplain Soils (F19)
Stratified	d Layers (A5)		Depleted Ma	atrix (F3))			(MLRA 136	ծ, 147)
2 cm Mı	uck (A10) (LRR N)		Redox Dark	Surface	(F6)			Red Parent M	Material (F21)
Deplete	d Below Dark Surface	e (A11)	Depleted Da	irk Surfa	ice (F7)			(outside N	ILRA 127, 147, 148)
Thick Da	ark Surface (A12)		Redox Depr	essions	(F8)			Very Shallow	/ Dark Surface (F22)
Sandy N	/lucky Mineral (S1)		Iron-Mangar	nese Ma	sses (F12	2) (LRR N	l,	Other (Explai	in in Remarks)
Sandy G	Gleyed Matrix (S4)		MLRA 13	6)					
Sandy F	Redox (S5)		Umbric Surf	ace (F13	B) (MLRA	122, 136	5)	³ Indicators of hyd	Irophytic vegetation and
Stripped	l Matrix (S6)		Piedmont Fl	oodplair	n Soils (F	19) (MLR	A 148)	wetland hydr	ology must be present,
Dark Su	rface (S7)		Red Parent	Material	(F21) (M	LRA 127,	147, 148)	unless distur	bed or problematic.
	Layer (if observed):								
Type:									
Depth (i	nches):						Hydric Soi	I Present?	res NoX

Appendix C Site Photographs





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



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





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



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





Photograph 5: General view of SCE and SCF in the central portion of the Site



Photograph 6: General view of SCG in the central portion of the Site





Photograph 7: General view typical of SCH, SCI, SCJ, SCK, and SCL in the southwestern portion of the Site.



Photograph 8: General view of SCM in the western portion of the Site



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Photograph 9: General view of SCN in the west-central portion of the Site



Photograph 10: General view of SCO and SCQ in the central portion of the Site





Photograph 11: General view typical of SCP and SCCC in the northern portion of the Site.



Photograph 12: General view of SCR in the western portion of the Site





Photograph 9: General view of SCS, SCT, SCU and SCV in the west-central portion of the Site



Photograph 10: General view of SCW and SCX in the northern portion of the Site.



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Photograph 9: View at the terminus of SCY in the northeastern portion of the Site.



Photograph 10: General view typical of SCZ, SCAA, and SCBB in the northwestern portion of the Site.



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Photograph 13: General view of Wetland Area "A" in the eastern portion of the Site



Photograph 14: General view of Wetland Area "B" and "C" in the southeastern portion of the Site



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Photograph 15: General view typical of Wetland Area "D," "E," and "U" in the northern portion of the Site



Photograph 16: General view of Wetland Area "F" in the eastern portion of the Site



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Photograph 17: General view of Wetland Area "G" in the eastern portion of the Site



Photograph 18: General view of Wetland Area "H" in the central portion of the Site



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Photograph 19: General view of Wetland Area "I" in the central portion of the Site



Photograph 20: General view of Wetland Area "J" in the southern portion of the Site



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Photograph 21: General view typical of Wetland Area "K" and "L" in the southwestern portion of the Site



Photograph 22: General view typical of Wetland Area "M" and "N" in the northern portion of the Site



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Photograph 23: General view of Wetland Area "O" in the western portion of the Site



Photograph 24: General view of Wetland Area "P" in the western portion of the Site



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Photograph 25: General view of Wetland Area "Q" in the northeastern portion of the Site



Photograph 26: General view of Wetland Area "R" in the northeastern portion of the Site



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Photograph 27: General view typical of Wetland Area "S" and "T" in the northeastern portion of the Site



Photograph 28: General view of Wetland Area "V" in the eastern portion of the Site



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