

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: BR-820011 City/County: Scotland Sampling Date: 03/28/12
 Applicant/Owner: NCDOT State: NC Sampling Point: WA - WD wet
 Investigator(s): D. Riffe, J. Mason, J. Dilday, A. James Section, Township, Range: Silver Hill
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): concave Slope (%): 2%
 Subregion (LRR or MLRA): P Lat: 34.810579 Long: -79.485134 Datum: NAD83
 Soil Map Unit Name: Johnston soil 0-2% slopes NWI classification: PF01
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☒	No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soil Present?	Yes ☒	No ☐	
Wetland Hydrology Present?	Yes ☒	No ☐	
Remarks: There are four wetlands located on each side of bridge. Wetlands are the same on all sides. NCWAM at sample point = Bottomland Hardwood Forest. Closer to creek it grades into a Riverine Swamp Forest.			

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)				<u>Secondary Indicators (minimum of two required)</u>			
☐ Surface Water (A1) ☐ High Water Table (A2) ☒ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☒ Water-Stained Leaves (B9)	☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) (LRR U) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres along Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Sparsely Vegetated Concave Surface (B8) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☒ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☒ FAC-Neutral Test (D5) ☐ Sphagnum moss (D8) (LRR T, U)					
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): _____ Water Table Present? Yes ☐ No ☒ Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): <u>5</u>				Wetland Hydrology Present? Yes ☒ No ☐			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
Remarks:							

VEGETATION – Use scientific names of plants

Sampling Point: WA - WD wet

<u>Tree Stratum</u> (Plot size: <u>30 ft</u>)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u><i>Acer rubrum</i></u>	<u>40</u>	<u>Y</u>	<u>FAC</u>
2.	<u><i>Liriodendrum tulipifera</i></u>	<u>20</u>	<u>Y</u>	<u>FAC</u>
3.	<u><i>Ilex opaca</i></u>	<u>10</u>	_____	<u>FAC-</u>
4.	<u><i>Nyssa sylvatica</i></u>	<u>5</u>	_____	<u>FAC</u>
5.	<u><i>Cyrilla racemiflora</i></u>	<u>5</u>	_____	<u>FACW</u>
6.	<u><i>Magnolia virginiana</i></u>	<u>5</u>	_____	<u>FACW+</u>
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____
		<u>85</u>	= Total Cover	
50% of total cover: <u>42.5</u> 20% of total cover: <u>17</u>				

<u>Sapling/Shrub Stratum</u> (Plot size:30 ft)			
1.	<u>Eubotrys racemosa</u>	<u>60</u>	<u>Y</u> <u>FACW</u>
2.	<u>Ilex criacea</u>	<u>25</u>	<u>Y</u> <u>FACW</u>
3.	<u>Magnolia virginiana</u>	<u>5</u>	<u> </u> <u>FACW+</u>
4.	<u>Lyonia lucida</u>	<u>5</u>	<u> </u> <u>FACW</u>
5.	<u>Persea borbonia</u>	<u>5</u>	<u> </u> <u>FACW</u>
6.	<u>Cyrilla racemiflora</u>	<u>3</u>	<u> </u> <u>FACW</u>
7.	<u> </u>	<u> </u>	<u> </u> <u> </u>
8.	<u> </u>	<u> </u>	<u> </u> <u> </u>
		<u>103</u>	= Total Cover
50% of total cover: <u>51.5</u> 20% of total cover: <u>20.6</u>			

<u>Herb Stratum</u> (Plot size:30 ft)			
1.	<u>Osunda cinnanonea</u>	<u>2</u>	<u>Y</u> <u>FACW+</u>
2.	<u>Woodwardia areolata</u>	<u>2</u>	<u>Y</u> <u>OBL</u>
3.	<u>Athyrium filix famina - asplenioides</u>	<u>2</u>	<u>Y</u> <u>FAC</u>
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____
7.	_____	_____	_____
8.	_____	_____	_____
9.	_____	_____	_____
10.	_____	_____	_____
11.	_____	_____	_____
12.	_____	_____	_____
		<u>6</u>	= Total Cover
50% of total cover: <u>3</u> 20% of total cover: <u>1.2</u>			

<u>Woody Vine Stratum</u> (Plot size:0)				
1.	<u>N/A</u>	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
		_____	= Total Cover	
		50% of total cover: <u> </u> 20% of total cover: <u> </u>		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	<u>7</u>	(A)
Total Number of Dominant Species Across All Strata:	<u>7</u>	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100</u>	(A/B)

Prevalence Index worksheet:

Total % Cover of :	Multiply by:
OBL species _____	x1 = _____
FACW species _____	x2 = _____
FAC species _____	x3 = _____
FACU species _____	x4 = _____
UPL species _____	x5 = _____
Column Totals: _____ (A)	_____ (B)
Prevalence Index = B/A = _____	

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
☒ 2 - Dominance Test is >50%
☐ 3 - Prevalence Index is $\leq 3.0^1$
☐ Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

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

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft tall.

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

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

Hydrophytic Vegetation Present?
 Yes ☒ No ☐

Remarks: (If observed, list morphological adaptations below).

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Species were similar in all 4 quadrants surrounding bridge.

SOIL

Sampling Point: WA - WD wet

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR2/1	100					SiCILM	silt clay loam
3-12+	2.5N	100					SiCILm	silt caly loam

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) (LRR P, T, U)
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
☐ Muck Presence (A8) (LRR U)
☐ 1 cm Muck (A9) (LRR P, T)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) (MLRA 150A)
☐ Sandy Mucky Mineral (S1) (LRR O, S)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
☐ Thin Dark Surface (S9) (LRR S, T, U)
☐ Loamy Mucky Mineral (F1) (LRR U)
☒ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (LRR U)
☐ Depleted Ochric (F11) (MLRA 151)
☐ Iron-Manganese Masses (F12) (LRR O, P, T)
☒ Umbric Surface (F13) (LRR P, T, U)
☐ Delta Ochric (F17) (MLRA 151)
☐ Reduced Vertic (F18) (MLRA 150A, 150B)
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20) (MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

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

Restrictive Layer (if present):

 Type: _____
 Depth (inches): _____

Hydric Soils Present?

Yes ☒ No ☐

Remarks: BR# 820011 Wetland

Soil unit for wetlands listed as frequently flooded.