

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: 910161 City/County: Wake Sampling Date: 8/2/12
 Applicant/Owner: NC DOT State: NC Sampling Point: Wet: WA - WD
 Investigator(s): D. Riffe & J. Mason Section, Township, Range: Rolesville
 Landform (hillslope, terrace, etc.): Fringe Local relief (concave, convex, none): none Slope (%): 2
 Subregion (LRR or MLRA): P Lat: 35.916910 Long: -78.390496 Datum: NAD83
 Soil Map Unit Name: wedhakee NWI classification: PEMJ
 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: WA, WB, WD: Fringe wetlands subject to flooding. WC is a wetland in between a braided channel.					

HYDROLOGY

Wetland Hydrology Indicators:				<u>Secondary Indicators (minimum of two required)</u>				
Primary Indicators (minimum of one is required; check all that apply)								
☒ Surface Water (A1)	☐ Hydrogen Sulfide Odor (C1)	☐ Surface Soil Cracks (B6)						
☐ High Water Table (A2)	☐ Oxidized Rhizospheres along Living Roots (C3)	☐ Sparsely Vegetated Concave Surface (B8)						
☒ Saturation (A3)	☐ Presence of Reduced Iron (C4)	☐ Drainage Patterns (B10)						
☐ Water Marks (B1)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Moss Trim Lines (B16)						
☐ Sediment Deposits (B2)	☐ Thin Muck Surface (C7)	☐ Dry-Season Water Table (C2)						
☐ Drift Deposits (B3)	☐ Other (Explain in Remarks)	☐ Crayfish Burrows (C8)						
☐ Algal Mat or Crust (B4)		☐ Saturation Visible on Aerial Imagery (C9)						
☐ Iron Deposits (B5)		☐ Stunted or Stressed Plants (D1)						
☐ Inundation Visible on Aerial Imagery (B7)		☒ Geomorphic Position (D2)						
☐ Water-Stained Leaves (B9)		☐ Shallow Aquitard (D3)						
☐ Aquatic Fauna (B13)		☐ Microtopographic Relief (D4)						
		☐ FAC-Neutral Test (D5)						
Field Observations:						Wetland Hydrology Present? Yes ☒ No ☐		
Surface Water Present?	Yes	☒	No	☐	Depth (inches):			<u>1</u>
Water Table Present?	Yes	☒	No	☐	Depth (inches):			<u>0</u>
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):			<u>0</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks: Wetlands subject to flooding due to fringe location along stream.								

VEGETATION – Use scientific names of plants

Sampling Point: Wet: WA - WD

<u>Tree Stratum</u> (Plot size: <u>10ft</u>)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Liquidambar styraciflua</u>	<u>50</u>	<u>Y</u>	<u>FAC+</u>
2.	<u>Fraxinus pennsylvanica</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____
		<u>70</u>	= Total Cover	
50% of total cover: <u>35</u> 20% of total cover: <u>14</u>				

<u>Sapling/Shrub Stratum</u> (Plot size: <u>10ft</u>)				
1.	<u>Alnus serrulata</u>	<u>20</u>	<u>Y</u>	<u>FAW+</u>
2.	<u>Morus rubra</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____
		<u>25</u>	= Total Cover	
50% of total cover: <u>12.5</u> 20% of total cover: <u>5</u>				

<u>Herb Stratum</u> (Plot size: 10ft)			
1.	<u>Murdannia keisak</u>	<u>30</u>	<u>Y</u> <u>OBL</u>
2.	<u>Microstegium vinineum</u>	<u>20</u>	<u>Y</u> <u>FAC</u>
3.	<u>Impatiens capensis</u>	<u>20</u>	<u>Y</u> <u>FACW</u>
4.	<u>Leersia oryzoides</u>	<u>20</u>	<u>Y</u> <u>OBL</u>
5.	<u>Vitis sp</u>	<u>2</u>	<u>N</u> <u>FAC</u>
6.	<u>Lonicer japonica</u>	<u>2</u>	<u>N</u> <u>FAC-</u>
7.	<u>Smilax rotundifolia</u>	<u>2</u>	<u>N</u> <u>FAC</u>
8.	<u>Toxicodendron radicans</u>	<u>2</u>	<u>N</u> <u>FAC</u>
9.	<u>Boehmeria cylindrica</u>	<u>2</u>	<u>N</u> <u>FACW+</u>
10.	<u>Rubus argutus</u>	<u>2</u>	<u>N</u> <u>FACU+</u>
11.	_____	_____	_____
12.	_____	_____	_____
		<u>102</u>	= Total Cover
50% of total cover: <u>51</u> 20% of total cover: <u>20</u>			

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

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	<u>6</u>	(A)
Total Number of Dominant Species Across All Strata:	<u>8</u>	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>75</u>	(A/B)

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).

SOIL

Sampling Point: Wet: WA - WD

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 4/4	100					LoamySand	
4-10	10YR 4/1	98	10YR 4/4	2	C	M	SandyLoam	
10-12	10YR 4/1	100					SiltLoam	

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) | ☐ Dark Surface (S7) |
| ☐ Histic Epipedon (A2) | ☐ Polyvalue Below Surface (S8) (MLRA 147, 148) |
| ☐ Black Histic (A3) | ☐ Thin Dark Surface (S9) (MLRA 147, 148) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) | ☒ Depleted Matrix (F3) |
| ☐ 2 cm Muck (A10) (LRR N) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) | ☐ Iron-Manganese Masses (F12) (LRR N, MLRA 136) |
| ☐ Sandy Gleyed Matrix (S4) | ☐ Umbric Surface (F13) (MLRA 136, 122) |
| ☐ Sandy Redox (S5) | ☐ Piedmont Floodplain Soils (F19) (MLRA 148) |
| ☐ Stripped Matrix (S6) | |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| ☐ 2 cm Muck (A10) (MLRA 147) |
| ☐ Coast Prairie Redox (A16) (MLRA 147, 148) |
| ☐ Piedmont Floodplain Soils (F19) |
| (MLRA 136, 147) |
| ☐ 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: For 10YR at depth 4-10 inches. Mottles wer present in the six inches.