



Non-water data point NONRE003 facing east  
(within inundated wetland)



Non-water data point NONRE003 facing west  
(within inundated wetland)

**WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region**

Project/Site: ACP City/County: Halifax Sampling Date: 11/10/16  
 Applicant/Owner: Dominion State: NC Sampling Point: nph1001  
 Investigator(s): ESI-Markham, Roper Section, Township, Range: none  
 Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): concave Slope (%): 2-3%  
 Subregion (LRR or MLRA): LRR P Lat: 36.41569 Long: -77.55748 Datum: NAD83  
 Soil Map Unit Name: Chewacla loam, 0 to 1% slopes, occ. flooded NWI classification: NA  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

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

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>NA</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>11</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>10</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	



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

Sampling Point: ndhb001

	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
<b>Tree Stratum</b> (Plot size: <u>15ft x 30ft</u> )				Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A)
1. <u>Fraxinus pennsylvanica</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	Total Number of Dominant Species Across All Strata: <u>8</u> (B)
2. <u>Acer rubrum</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>87.5</u> (A/B)
3. <u>Liquidambar styraciflua</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
4. <u>Platanus occidentalis</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
5. _____				
6. _____				
7. _____				
8. _____				
<u>85</u> = Total Cover 50% of total cover: <u>42.5</u> 20% of total cover: <u>17</u>				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15ft x 30ft</u> )				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
1. <u>Platanus occidentalis</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  <b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
2. <u>Acer rubrum</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Asimina parviflora</u>	<u>2</u>	<u>N</u>	<u>FACU</u>	
4. <u>Ostrya virginiana</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
5. <u>Ligustrum sinense</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
6. _____				
7. _____				
8. _____				
<u>72</u> = Total Cover 50% of total cover: <u>36</u> 20% of total cover: <u>14.4</u>				
<b>Herb Stratum</b> (Plot size: <u>15ft x 30ft</u> )				
1. <u>Saururus cernuus</u>	<u>10</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Erigeron strigosus</u>	<u>1</u>	<u>N</u>	<u>FAC</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>11</u> = Total Cover 50% of total cover: <u>5.5</u> 20% of total cover: <u>2.2</u>				
<b>Woody Vine Stratum</b> (Plot size: <u>15ft x 30ft</u> )				
1. <u>Campsis radicans</u>	<u>3</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Lonicera japonica</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
3. _____				
4. _____				
5. _____				
<u>13</u> = Total Cover 50% of total cover: <u>6.5</u> 20% of total cover: <u>2.6</u>				
Hydrophytic Vegetation Present?    Yes <input checked="" type="checkbox"/> No _____				
Remarks: (If observed, list morphological adaptations below).				

**SOIL**

Sampling Point: noh1001

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 <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 3/3	100					S:L	
4-14	10YR 4/3	60	10YR 4/6	40	C	M	CL	
14-20	10YR 4/4	90	10YR 4/2	5	D	M	CL	
			5YR 4/4	5	C	M		

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)      Indicators for Problematic Hydric Soils<sup>3</sup>:

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Histosol (A1)                         | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)                 | <input type="checkbox"/> 1 cm Muck (A9) (LRR O)   |
| <input type="checkbox"/> Histic Epipedon (A2)                  | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)                       | <input type="checkbox"/> 2 cm Muck (A10) (LRR S)  |
| <input type="checkbox"/> Black Histic (A3)                     | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)                           | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)   |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                 | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                                   | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)  |
| <input type="checkbox"/> Stratified Layers (A5)                | <input type="checkbox"/> Depleted Matrix (F3)                                       | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20)   |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)     | <input type="checkbox"/> Redox Dark Surface (F6)                                    | <input type="checkbox"/> (MLRA 153B)  |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Depleted Dark Surface (F7)                                 | <input type="checkbox"/> Red Parent Material (TF2)  |
| <input type="checkbox"/> Muck Presence (A8) (LRR U)            | <input type="checkbox"/> Redox Depressions (F8)                                     | <input type="checkbox"/> Very Shallow Dark Surface (TF12)   |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)             | <input type="checkbox"/> Marl (F10) (LRR U)   | <input type="checkbox"/> Other (Explain in Remarks)   |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)     | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)                           |   |
| <input type="checkbox"/> Thick Dark Surface (A12)              | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)                  | <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)                         |   |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)   | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151)                              |   |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)              | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)                     |   |
| <input type="checkbox"/> Sandy Redox (S5)                      | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)                |   |
| <input type="checkbox"/> Stripped Matrix (S6)                  | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |   |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)    |   |   |

Restrictive Layer (If observed):  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:



*Environmental Field Surveys*  
*Non-water Point Photo Page*



**Non-water point nohlo001 facing west.  
(NWI, not a wetland)**



**Non-water point nohlo001 facing south.  
(NWI, not a wetland)**



**WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region**

Project/Site: ACP City/County: Halifax Sampling Date: 10/08/2014  
 Applicant/Owner: Dominion State: NC Sampling Point: noh1h005  
 Investigator(s): DWest Section, Township, Range: NA  
 Landform (hillslope, terrace, etc.): Flood Plain Local relief (concave, convex, none): NONE Slope (%): 0  
 Subregion (LRR or MLRA): T Lat: 36°24'52.016" Long: 77°33'34.196" Datum: NAD 84  
 Soil Map Unit Name: Riverview NWI classification: N/A  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? No Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? No (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: <p align="center" style="font-size: 1.2em; font-family: cursive;">The sampling point is not located within a wetland.</p>	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <p align="center" style="font-size: 1.2em; font-family: cursive;">Hydrology present.</p>	



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

Sampling Point: nohlh005

Tree Stratum (Plot size: <u>36</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Fraxinus pennsylvanica</i>	20	Y	FACW
2. <i>Acer negundo</i>	20	Y	FAC
3. <i>Platanus occidentalis</i>	20	Y	FACW
4.			
5.			
6.			
7.			
8.			

60 = Total Cover  
 50% of total cover: 30 20% of total cover: 12

Sapling/Shrub Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Ligustrum sinense</i>	20	Y	FAC
2. <i>Liquidambar styraciflua</i>	10	Y	FAC
3. <i>Acer negundo</i>	10	Y	FACW
4.			
5.			
6.			
7.			
8.			

40 = Total Cover  
 50% of total cover: 20 20% of total cover: 8

Herb Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Commelina communis</i>	30	Y	FAC
2. <i>Microstegium vimineum</i>	10	Y	FAC
3. <i>Rubus argutus</i>	10	Y	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			

50 = Total Cover  
 50% of total cover: 25 20% of total cover: 10

Woody Vine Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Lonicera japonica</i>	10	Y	FACW
2.			
3.			
4.			
5.			

10 = Total Cover  
 50% of total cover: 5 20% of total cover: 2

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 9 (A)

Total Number of Dominant Species Across All Strata: 10 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 90 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
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 ≤3.0<sup>1</sup>

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

**Definitions of Four Vegetation Strata:**

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

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

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

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

**Hydrophytic Vegetation Present?** Yes  No \_\_\_\_\_

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

Hydrophytic vegetation is dominant.

SOIL

Sampling Point: 106/12 005

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 <sup>1</sup>	Loc <sup>2</sup>		
0-10	10YR4/4	80	5YR 4/6	20			loam	
10-218	7.5YR4/4	85	5YR 4/6	15			loam	

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

- |  |   |   |
|--|---|---|
| <p><b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Histosol (A1)</li> <li><input type="checkbox"/> Histic Epipedon (A2)</li> <li><input type="checkbox"/> Black Histic (A3)</li> <li><input type="checkbox"/> Hydrogen Sulfide (A4)</li> <li><input type="checkbox"/> Stratified Layers (A5)</li> <li><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</li> <li><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</li> <li><input type="checkbox"/> Muck Presence (A8) (LRR U)</li> <li><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</li> <li><input type="checkbox"/> Depleted Below Dark Surface (A11)</li> <li><input type="checkbox"/> Thick Dark Surface (A12)</li> <li><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</li> <li><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</li> <li><input type="checkbox"/> Sandy Gleyed Matrix (S4)</li> <li><input type="checkbox"/> Sandy Redox (S5)</li> <li><input type="checkbox"/> Stripped Matrix (S6)</li> <li><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</li> </ul> | <p><b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)</li> <li><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)</li> <li><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)</li> <li><input type="checkbox"/> Loamy Gleyed Matrix (F2)</li> <li><input type="checkbox"/> Depleted Matrix (F3)</li> <li><input type="checkbox"/> Redox Dark Surface (F6)</li> <li><input type="checkbox"/> Depleted Dark Surface (F7)</li> <li><input type="checkbox"/> Redox Depressions (F8)</li> <li><input type="checkbox"/> Marl (F10) (LRR U)</li> <li><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)</li> <li><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)</li> <li><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)</li> <li><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)</li> <li><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)</li> <li><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)</li> <li><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</li> <li><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</li> <li><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</li> <li><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</li> <li><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</li> <li><input type="checkbox"/> Red Parent Material (TF2)</li> <li><input type="checkbox"/> Very Shallow Dark Surface (TF12)</li> <li><input type="checkbox"/> Other (Explain in Remarks)</li> </ul> <p><sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p> |
|--|---|---|

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:

Hydric soil is not present.



*nohlh005*



Non-Waterbody nohlh005 facing north.



Non-Waterbody nohlh005 facing south

*nohlh005*



Non-Waterbody nohlh005 facing east



Nov 12 004

NC DWQ Stream Identification Form Version 4.11

Date: 10/08/2014	Project/Site: ACP	Latitude: 36°24'46.116"
Evaluator: DPWest	County: Halifax	Longitude: 77°34'41.978"
Total Points: 9.75 <small>Stream is at least intermittent if ≥ 19 or perennial if ≥ 30*</small>	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other No-n-Water e.g. Quad Name: Point

A. Geomorphology (Subtotal = 7)

	Absent	Weak	Moderate	Strong
1 <sup>a</sup> 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	No = 0		Yes = 3	

<sup>a</sup> artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 2)

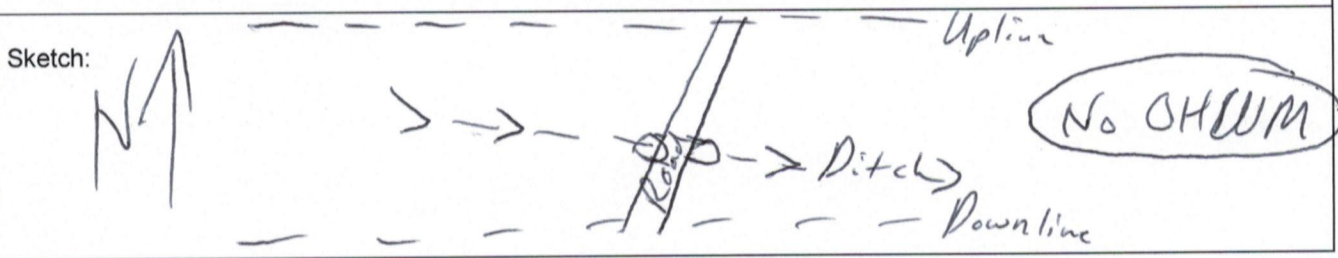
12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	3
14. Leaf litter	1.5	1	0.5	0
15. Sediment on plants or debris	0	0.5	1	1.5
16. Organic debris lines or piles	0	0.5	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes = 3	

C. Biology (Subtotal = 0.75)

18. Fibrous roots in streambed	3	2	1	0
19. Rooted upland plants in streambed	3	2	1	0
20. Macroinvertebrates (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			

\*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes:





*nohlh004*



Non-Waterbody nohlh004 facing south.



Non-Waterbody nohlh004 facing north



*nohlh004*



Non-Waterbody nohlh004 facing east

noh/2003

NC DWQ Stream Identification Form Version 4.11

Date: 10/09/14	Project/Site: ACP	Latitude: 36° 22' 16.567"
Evaluator: DP West	County: Halifax	Longitude: 77° 36' 26.222"
Total Points: 18 <i>Stream is at least intermittent if ≥ 19 or perennial if ≥ 30*</i>	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name:

A. Geomorphology (Subtotal = 11)

	Absent	Weak	Moderate	Strong
1 <sup>a</sup> 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	No = 0		Yes = 3	

<sup>a</sup> 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	0.5	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	

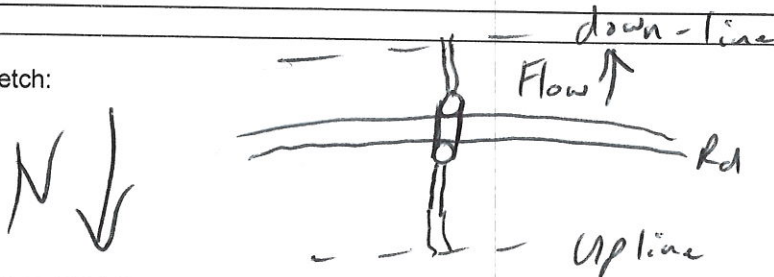
C. Biology (Subtotal = 3)

18. Fibrous roots in streambed	3	2	1	0
19. Rooted upland plants in streambed	3	2	1	0
20. Macroinvertebrates (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			

\*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes:

Sketch:





*nohlh003*



Non-Waterbody nohlh003 facing north.



Non-Waterbody nohlh003 facing south



*nohlh003*



Non-Waterbody nohlh003 facing east





Non-water point nohlf001 facing north



Non-water point nohlf001 facing south



Non-water data point nohlb051 facing west





Non-water data point NOHLB050 facing northwest

**WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region**

Project/Site: SE Reliability City/County: Halifax Sampling Date: 7-10-14  
 Applicant/Owner: Dominion State: WV Sampling Point: NDH46 001  
 Investigator(s): DDWEST Section, Township, Range: NA  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Slightly concave Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): I Lat: 36°19'26.404" Long: 77°38'49.400" Datum: \_\_\_\_\_  
 Soil Map Unit Name: Goldboro fine sandy loam 02 NWI classification: N/A  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 <u>X</u> Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: <p align="center"><i>Depressional area directly adjacent to large canal effectively drained. Dominated with upland vegetation</i></p>	

**HYDROLOGY**

<p><b>Wetland Hydrology Indicators:</b></p> <p>Primary Indicators (minimum of one is required; check all that apply)</p> <table style="width:100%;"> <tr> <td><input type="checkbox"/> Surface Water (A1)</td> <td><input type="checkbox"/> Aquatic Fauna (B13)</td> </tr> <tr> <td><input type="checkbox"/> High Water Table (A2)</td> <td><input type="checkbox"/> Marl Deposits (B15) (LRR U)</td> </tr> <tr> <td><input type="checkbox"/> Saturation (A3)</td> <td><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td><input type="checkbox"/> Water Marks (B1)</td> <td><input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</td> </tr> <tr> <td><input type="checkbox"/> Sediment Deposits (B2)</td> <td><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td><input type="checkbox"/> Drift Deposits (B3)</td> <td><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td><input type="checkbox"/> Algal Mat or Crust (B4)</td> <td><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td><input type="checkbox"/> Iron Deposits (B5)</td> <td><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Water-Stained Leaves (B9)</td> <td></td> </tr> </table>	<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Water-Stained Leaves (B9)		<p>Secondary Indicators (minimum of two required)</p> <table style="width:100%;"> <tr><td><input type="checkbox"/> Surface Soil Cracks (B6)</td></tr> <tr><td><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</td></tr> <tr><td><input type="checkbox"/> Drainage Patterns (B10)</td></tr> <tr><td><input type="checkbox"/> Moss Trim Lines (B16)</td></tr> <tr><td><input type="checkbox"/> Dry-Season Water Table (C2)</td></tr> <tr><td><input type="checkbox"/> Crayfish Burrows (C8)</td></tr> <tr><td><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</td></tr> <tr><td><input checked="" type="checkbox"/> Geomorphic Position (D2)</td></tr> <tr><td><input type="checkbox"/> Shallow Aquitard (D3)</td></tr> <tr><td><input type="checkbox"/> FAC-Neutral Test (D5)</td></tr> <tr><td><input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)</td></tr> </table>	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)	<input type="checkbox"/> FAC-Neutral Test (D5)	<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)																															
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)																															
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)																															
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)																															
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)																															
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)																															
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)																															
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)																															
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)																																
<input type="checkbox"/> Water-Stained Leaves (B9)																																
<input type="checkbox"/> Surface Soil Cracks (B6)																																
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)																																
<input type="checkbox"/> Drainage Patterns (B10)																																
<input type="checkbox"/> Moss Trim Lines (B16)																																
<input type="checkbox"/> Dry-Season Water Table (C2)																																
<input type="checkbox"/> Crayfish Burrows (C8)																																
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)																																
<input checked="" type="checkbox"/> Geomorphic Position (D2)																																
<input type="checkbox"/> Shallow Aquitard (D3)																																
<input type="checkbox"/> FAC-Neutral Test (D5)																																
<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)																																
<p><b>Field Observations:</b></p> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes _____ No <u>X</u> Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <u>X</u>																															
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:																																
Remarks: <p align="center"><i>Small depressional area with relict hydric soils and dominated by upland vegetation effectively drained by large adjacent canal ditch</i></p>																																



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

Sampling Point: \_\_\_\_\_

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. <u>NONE</u>			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species	x 1 = _____
FACW species <u>42</u>	x 2 = <u>84</u>
FAC species <u>2</u>	x 3 = <u>6</u>
FACU species <u>50</u>	x 4 = <u>200</u>
UPL species <u>2</u>	x 5 = <u>10</u>
Column Totals: <u>46</u> (A)	<u>300</u> (B)

Prevalence Index = B/A = 3.125

Sapling/Shrub Stratum (Plot size: \_\_\_\_\_)

1. _____			
2. <u>NONE</u>			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
  - 2 - Dominance Test is >50%
  - 3 - Prevalence Index is ≤3.0<sup>1</sup>
  - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Herb Stratum (Plot size: 10)

1. <del>Coryphaea</del> <u>canadensis</u>	<u>30</u> <sup>d</sup>	<input checked="" type="checkbox"/>	<u>FACU</u>
2. <u>Eupatorium capilli folium</u>	<u>10</u>		<u>FACU</u>
3. <u>Echinochloa crusgali</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>FACW</u>
4. <u>Ambrosia artemisiifolia</u>	<u>5</u>		<u>FACU</u>
5. <u>Juncus tenuis</u>	<u>2</u>		<u>FAC</u>
6. <u>Lespedeza virginica</u>	<u>2</u>		<u>UPL</u>
7. <u>Solidago altissima</u>	<u>5</u>		<u>FACU</u>
8. <u>Polygonum hydropiperoides</u>	<u>2</u>		<u>FACW</u>
9. <del>Valeriana</del>	<u>2</u>		
10. _____			
11. _____			
12. _____			

\_\_\_\_\_ = Total Cover  
 50% of total cover: 48 20% of total cover: 19.2

**Definitions of Four Vegetation Strata:**

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

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

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

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

Woody Vine Stratum (Plot size: \_\_\_\_\_)

1. _____			
2. <u>NONE</u>			
3. _____			
4. _____			
5. _____			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No X

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

Vegetation shifting to more upland species.

SOIL

Sampling Point: NO HLG 007

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 <sup>1</sup>	Loc <sup>2</sup>		
0-6	2.5Y 5/4						LOAM	
6-14"	2.5Y 5/1		10YR 5/8	72D	C	M	CLAY LOAM	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: 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 O)
  - 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 Soils<sup>3</sup>:
- 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)
- <sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes X No \_\_\_\_\_

Remarks:

Hydric soil indicator F3 present. However redoximorphic concentration do not exhibit diffuse boundaries. Therefore, these are relict hydric soils. Additional evidence of relict conditions, plant community dominated with upland vegetation

The hydrology has been effectively removed by adjacent canal ditch





NOHLG001 – Facing West Non-Wetland



NOHLG001 – Facing East Non-Wetland



NOHLG001 – Relic Hydric Soils





Waterbody NOHLB100 facing east



Non-water data point NOHLE001 facing east  
(within inundated wetland)



Non-water data point NOHLE001 facing west  
(within inundated wetland)



NONA00L-U

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: SERP City/County: Nash Sampling Date: 7/22/14  
 Applicant/Owner: Dominion State: NC Sampling Point: nonag001  
 Investigator(s): DJD Section, Township, Range: NA  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): T Lat: 36° 08' 42.200" Long: 77° 47' 43.457" Datum: \_\_\_\_\_  
 Soil Map Unit Name: ~~Chatham~~ Congaree NWI classification: \_\_\_\_\_  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 <u>X</u> No _____	Is the Sampled Area within a Wetland?	Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____ No <u>X</u>		
Wetland Hydrology Present?	Yes _____ No <u>X</u>		
Remarks: <u>Not three parameters present</u>			

HYDROLOGY

<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (minimum of two required)</b>	
<b>Primary Indicators (minimum of one is required; check all that apply)</b>			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> FAC-Neutral Test (D5)	
		<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
<b>Field Observations:</b>			
Surface Water Present?	Yes _____ No <u>X</u> Depth (inches): <u>1</u>	Wetland Hydrology Present? Yes _____ No <u>X</u>	
Water Table Present?	Yes _____ No <u>X</u> Depth (inches): <u>&gt;12"</u>		
Saturation Present? (includes capillary fringe)	Yes _____ No <u>X</u> Depth (inches): <u>&gt;12"</u>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: <u>No hydrology present</u>			

NONA001-u

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

Sampling Point: \_\_\_\_\_

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Fragaria pennsylvanica</i>	30	✓	FACW
2. <i>Quercus alba</i>	20	✓	FACW
3. <i>Fagus grandifolia</i>	20	✓	FACW
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____

70 = Total Cover  
 50% of total cover: 35 20% of total cover: 14

Sapling/Shrub Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Fagus grandifolia</i>	10	✓	FACW
2. <del>_____</del>	_____	_____	_____
3. <i>Carpinus caroliniana</i>	10	✓	FAC
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____

20 = Total Cover  
 50% of total cover: 10 20% of total cover: 4

Herb Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <del>_____</del> <i>Lindera benzoin</i>	10	✓	FACW
2. <del>_____</del>	_____	_____	_____
3. <i>Chasmanthium sessiliflorum</i>	10	✓	FAC
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

20 = Total Cover  
 50% of total cover: 10 20% of total cover: 4

Woody Vine Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Lonicera japonica</i>	15	✓	FAC
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

15 = Total Cover  
 50% of total cover: 7.5 20% of total cover: 3

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

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: \_\_\_\_\_ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
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 ≤3.0<sup>1</sup>
- Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present?

Yes \_\_\_\_\_ No \_\_\_\_\_



NONA001 - 0

SOIL

Sampling Point: \_\_\_\_\_

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 <sup>1</sup>	Loc <sup>2</sup>		
0-6	7.5YR.5/6	100					L	

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

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

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

Indicators for Problematic Hydric Soils<sup>3</sup>:

- 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 O)
- 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)

- 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)

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

Restrictive Layer (if observed):

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No

Remarks:

*nonag001*



Upland data point nonag001 facing east



Upland data point nonag001 facing north



*nonag001 soils*



*Wetland/upland soils*



Non-water data point NONAE001 facing northwest



Non-water data point NONAE001 facing southeast



NONAH005

NC DWQ Stream Identification Form Version 4.11

Date: 10/06/2014	Project/Site: ACP	Latitude: 36°08'23.915"
Evaluator: DDWest	County: Nash	Longitude: 77°48'05.080"
Total Points: 15 <i>Stream is at least intermittent if ≥ 19 or perennial if ≥ 30*</i>	Stream Determination (circle one) <b>Ephemeral</b> Intermittent Perennial	Other <del>UNFL</del> e.g. Quad Name:

A. Geomorphology (Subtotal = 5)

	Absent	Weak	Moderate	Strong
1 <sup>a</sup> . 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	No = 0		Yes = 3	

<sup>a</sup> artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 6)

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)

18. Fibrous roots in streambed	3	2	1	0
19. Rooted upland plants in streambed	3	2	1	0
20. Macroinvertebrates (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			

\*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes:

Sketch:



nonah 005

~~nonah 005~~

Ditch w/out OHWM



*nonah005*



Non-Waterbody nonah005 facing east.



Non-Waterbody nonah005 facing west



*nonah005*



Non-Waterbody nonah005 facing south

**WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region**

Project/Site: JERP City/County: WASA Sampling Date: 7-24-14  
 Applicant/Owner: Dommon State: NC Sampling Point: NONAL001  
 Investigator(s): DDWEST Section, Township, Range: NA  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): - Slope (%): 0-2  
 Subregion (LRR or MLRA): J Lat: 36° 04' 47.157" Long: 77° 51' 20.890" Datum: -  
 Soil Map Unit Name: Goldsboro fine sandy loam NWI classification: ~~SPD~~ -  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

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

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply) <table style="width:100%; border: none;"> <tr> <td><input type="checkbox"/> Surface Water (A1)</td> <td><input type="checkbox"/> Aquatic Fauna (B13)</td> </tr> <tr> <td><input type="checkbox"/> High Water Table (A2)</td> <td><input type="checkbox"/> Marl Deposits (B15) (LRR U)</td> </tr> <tr> <td><input type="checkbox"/> Saturation (A3)</td> <td><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td><input type="checkbox"/> Water Marks (B1)</td> <td><input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</td> </tr> <tr> <td><input type="checkbox"/> Sediment Deposits (B2)</td> <td><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td><input type="checkbox"/> Drift Deposits (B3)</td> <td><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td><input type="checkbox"/> Algal Mat or Crust (B4)</td> <td><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td><input type="checkbox"/> Iron Deposits (B5)</td> <td><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Water-Stained Leaves (B9)</td> <td></td> </tr> </table>	<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) <table style="width:100%; border: none;"> <tr><td><input type="checkbox"/> Surface Soil Cracks (B6)</td></tr> <tr><td><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</td></tr> <tr><td><input type="checkbox"/> Drainage Patterns (B10)</td></tr> <tr><td><input type="checkbox"/> Moss Trim Lines (B16)</td></tr> <tr><td><input type="checkbox"/> Dry-Season Water Table (C2)</td></tr> <tr><td><input type="checkbox"/> Crayfish Burrows (C8)</td></tr> <tr><td><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</td></tr> <tr><td><input type="checkbox"/> Geomorphic Position (D2)</td></tr> <tr><td><input type="checkbox"/> Shallow Aquitard (D3)</td></tr> <tr><td><input type="checkbox"/> FAC-Neutral Test (D5)</td></tr> <tr><td><input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)</td></tr> </table>	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)	<input type="checkbox"/> FAC-Neutral Test (D5)	<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)																															
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)																															
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)																															
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)																															
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)																															
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)																															
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)																															
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)																															
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)																																
<input type="checkbox"/> Water-Stained Leaves (B9)																																
<input type="checkbox"/> Surface Soil Cracks (B6)																																
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)																																
<input type="checkbox"/> Drainage Patterns (B10)																																
<input type="checkbox"/> Moss Trim Lines (B16)																																
<input type="checkbox"/> Dry-Season Water Table (C2)																																
<input type="checkbox"/> Crayfish Burrows (C8)																																
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)																																
<input type="checkbox"/> Geomorphic Position (D2)																																
<input type="checkbox"/> Shallow Aquitard (D3)																																
<input type="checkbox"/> FAC-Neutral Test (D5)																																
<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)																																

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

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

Remarks: No hydrology present



NONAH001

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

Sampling Point: \_\_\_\_\_

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Acer rubrum</i>	25	✓	FAC
2. <i>Quercus alba</i>	25	✓	FACU
3. <i>Liriodendron tulipifera</i>	15		FACU
4. <i>Liquidambar styraciflua</i>	25	✓	FAC
5. _____			
6. _____			
7. _____			
8. _____			

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 78 (A/B)

90 = Total Cover  
 50% of total cover: 45 20% of total cover: 18

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: \_\_\_\_\_)

1. <i>Liquidambar styraciflua</i>	30	✓	FAC
2. <i>Liriodendron tulipifera</i>	20	✓	FACU
3. <i>Closteria alnifolia</i>	30	✓	FACW
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
  - 2 - Dominance Test is >50%
  - 3 - Prevalence Index is ≤3.0<sup>1</sup>
  - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

80 = Total Cover  
 50% of total cover: 40 20% of total cover: 16

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

Herb Stratum (Plot size: \_\_\_\_\_)

1. <i>Claytonia siliquosa</i>	50	✓	FAC
2. <i>Closteria alnifolia</i>	25	✓	FACW
3. <i>Vitis rotundifolia</i>	3		FAC
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			

**Definitions of Four Vegetation Strata:**

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

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

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

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

80 = Total Cover  
 50% of total cover: 40 20% of total cover: 16

Woody Vine Stratum (Plot size: \_\_\_\_\_)

1. <i>Vitis rotundifolia</i>	20	✓	FAC
2. _____			
3. _____			
4. _____			
5. _____			

**Hydrophytic Vegetation Present?** Yes X No \_\_\_\_\_

20 = Total Cover  
 50% of total cover: 10 20% of total cover: 4

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

NONAHOOL

SOIL

Sampling Point: \_\_\_\_\_

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 <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR 4/2						sandy loam	
5-16	10YR 5/3						sandy loam	

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

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

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

Indicators for Problematic Hydric Soils<sup>3</sup>:

- 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 O)
- 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)

- 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)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No

Remarks:

No hydric soil present



*nonah001*



Non-water data point nonah001 facing east



Non-water data point nonah001 facing south

*nonah001 soils*



*upland soils*



**WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region**

Project/Site: SERP City/County: NASH Sampling Date: 7-24-14  
 Applicant/Owner: Dominion State: NC Sampling Point: NONAH002  
 Investigator(s): DDWEST Section, Township, Range: NA  
 Landform (hillslope, terrace, etc.): Pasture Local relief (concave, convex, none): — Slope (%): —  
 Subregion (LRR or MLRA): T Lat: 36°04'23.963" Long: 77°51'43.645" Datum: —  
 Soil Map Unit Name: Rains NWI classification: —  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes — No X (If no, explain in Remarks.)  
 Are Vegetation —, Soil —, or Hydrology — significantly disturbed? Are "Normal Circumstances" present? Yes X 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 <u>—</u> No <u>X</u> Hydric Soil Present? Yes <u>—</u> No <u>X</u> Wetland Hydrology Present? Yes <u>—</u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u>—</u> No <u>X</u>
Remarks: <div style="font-size: 1.2em; font-family: cursive;">Cow pasture</div>	

**HYDROLOGY**

<p><b>Wetland Hydrology Indicators:</b></p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<p><u>Secondary Indicators (minimum of two required)</u></p> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<p><b>Field Observations:</b></p> Surface Water Present? Yes <u>—</u> No <u>X</u> Depth (inches): <u>—</u> Water Table Present? Yes <u>—</u> No <u>X</u> Depth (inches): <u>—</u> Saturation Present? (includes capillary fringe) Yes <u>—</u> No <u>X</u> Depth (inches): <u>—</u>	Wetland Hydrology Present? Yes <u>—</u> No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <div style="font-size: 1.5em; font-family: cursive;">No hydrology present</div>	

NONAH002

Sampling Point: \_\_\_\_\_

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

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Liquidambar styraciflua</i>	5	✓	FAC
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____

5 = Total Cover  
 50% of total cover: 2.5    20% of total cover: 1

Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_    20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Pentago virginica</i>	20	✓	FACU
2. <i>Paspalum notatum</i>	15	✓	FACU
3. <i>Aynodon dactylon</i>	60	✓	FACU
4. <i>Cnidocaulis stimulatus</i>	2	_____	UPL
5. <i>Dicella tetra</i>	3	_____	FACU
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

100 = Total Cover  
 50% of total cover: 50    20% of total cover: 20

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
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: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
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 ≤3.0<sup>1</sup>
  - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

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

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

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

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

Hydrophytic Vegetation Present?    Yes \_\_\_\_\_ No X

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

Cow pasture



NONAH002

SOIL

Sampling Point: \_\_\_\_\_

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 <sup>1</sup>	Loc <sup>2</sup>		
0-7	10YR 4/2						sandy loam	
7-12	10YR 5/3						sandy loam	
12-16+	10YR 5/6						SCL	

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

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<b>(MLRA 153B)</b>
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

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

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No

Remarks:

No hydric soil present

*nonah002*



Non-water data point nonah002 facing east



Non-water data point nonah002 facing south



*nonah002 soils*



*upland soils*

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

8-4-14

Project/Site: SERP City/County: NRCH Sampling Date: \_\_\_\_\_  
 Applicant/Owner: Dominion State: NC Sampling Point: ~~000000~~  
 Investigator(s): DDWEST Section, Township, Range: NA NONAH004  
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA) I Lat 36°00' 07.866" Long 77°54' 35.500" Datum: \_\_\_\_\_  
 Soil Map Unit Name Rains NWI classification \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_ Soil \_\_\_\_\_ or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 <u>X</u> No _____	Hydric Soil Present? Yes _____ No <u>X</u>	Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks <u>Not all three parameters present</u>			

HYDROLOGY

<p><b>Wetland Hydrology Indicators:</b></p> <p>Primary Indicators (minimum of one is required, check all that apply)</p> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input checked="" type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<p>Secondary Indicators (minimum of two required)</p> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
--	---

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No ? Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes \_\_\_\_\_ No ? Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

Wetland Hydrology Present? Yes \_\_\_\_\_ No X

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

Remarks  
Hydrology present is flash occurrence with no duration i.e. due to presence of upland soils.



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

Sampling Point: \_\_\_\_\_

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Acer rubrum</i>	35	✓	FAC
2. <i>Quercus laevis</i>	20	✓	FACW
3. <i>Liquidambar styraciflua</i>	20	✓	FAC
4. <i>Ilex opaca</i>	20	✓	FAC
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 11 (A)

Total Number of Dominant Species Across All Strata: 11 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

95 = Total Cover  
 50% of total cover: 47.5 20% of total cover: 19

**Prevalence Index worksheet:**

Total % Cover of: \_\_\_\_\_ Multiply by: \_\_\_\_\_

OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_

FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_

FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_

FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_

UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_

Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)

Prevalence Index = B/A = \_\_\_\_\_

**Sapling/Shrub Stratum (Plot size: \_\_\_\_\_)**

Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Corylus caroliniana</i>	20	✓	FAC
2. <i>Acer rubrum</i>	20	✓	FAC
3. <i>Ilex opaca</i>	15	✓	FAC
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

55 = Total Cover  
 50% of total cover: 27.5 20% of total cover: 11

**Herb Stratum (Plot size: \_\_\_\_\_)**

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Arenaria cymosa</i>	10	✓	FACW
2. <i>Artemisia trifida</i>	5	✓	FACW
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

**Definitions of Four Vegetation Strata:**

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

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

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

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

15 = Total Cover  
 50% of total cover: 7.5 20% of total cover: 3

**Woody Vine Stratum (Plot size: \_\_\_\_\_)**

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Lonicera japonica</i>	10	✓	FAC
2. <i>Smilax rotundifolia</i>	10	✓	FAC
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

**Hydrophytic Vegetation Present?** Yes X No \_\_\_\_\_

20 = Total Cover  
 50% of total cover: 10 20% of total cover: 4

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

NONAH004

SOIL

Sampling Point: \_\_\_\_\_

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 <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 4/3						LOAM	
4-14	10YR 5/8						SCL	

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

<sup>2</sup>Location: 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 O)
- 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 Soils<sup>3</sup>:

- 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)

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

Restrictive Layer (if observed):

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No

Remarks:

No hydric soil present



*nonah004*



**Non-water** data point nonah004 facing east



**Non-water** data point nonah004 facing south

*nonah004 soil*



*Upland soils*





Non-water data point NONAE003  
facing southeast – No water channel  
within wetland

## WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline City/County: Nash Sampling Date: 1/27/2015  
 Applicant/Owner: Dominion State: NC Sampling Point: nonab100  
 Investigator(s): TP, AS Section, Township, Range: No PLSS in this area  
 Landform (hillslope, terrace, etc.): drainage way Local relief (concave, convex, none): concave Slope (%): 2  
 Subregion (LRR or MLRA): P Lat: 35.95272 Long: -77.943272 Datum: WGS 1984  
 Soil Map Unit Name: Bibb loam, 0 to 2 percent slopes, frequently flooded NWI classification: PFO1A

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

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Upland point taken within NWI polygon.	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	



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

Sampling Point: nonab100

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: <u>30</u> )				
1. <i>Liquidambar styraciflua</i>	25	Yes	FAC	
2. <i>Acer rubrum</i>	10	Yes	FAC	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
$\frac{35}{100} = \text{Total Cover}$ 50% of total cover: <u>17.5</u> 20% of total cover: <u>7</u>				
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				
1. <i>Ligustrum sinense</i>	15	Yes	FACU	
2. <i>Ilex opaca</i>	10	Yes	FACU	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
$\frac{25}{100} = \text{Total Cover}$ 50% of total cover: <u>12.5</u> 20% of total cover: <u>5</u>				
<b>Herb Stratum</b> (Plot size: <u>5</u> )				
1. <i>Hedera helix</i>	35	Yes	FACU	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
$\frac{35}{100} = \text{Total Cover}$ 50% of total cover: <u>17.5</u> 20% of total cover: <u>7</u>				
<b>Woody Vine Stratum</b> (Plot size: <u>30</u> )				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
$\frac{0}{100} = \text{Total Cover}$ 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				
<b>Dominance Test worksheet:</b>				
Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)				
Total Number of Dominant Species Across All Strata: <u>5</u> (B)				
Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40</u> (A/B)				
<b>Prevalence Index worksheet:</b>				
Total % Cover of: _____    Multiply by: _____				
OBL species <u>0</u> x 1 = <u>0</u>				
FACW species <u>0</u> x 2 = <u>0</u>				
FAC species <u>35</u> x 3 = <u>105</u>				
FACU species <u>60</u> x 4 = <u>240</u>				
UPL species <u>0</u> x 5 = <u>0</u>				
Column Totals: <u>95</u> (A) <u>345</u> (B)				
Prevalence Index = B/A = <u>3.63</u>				
<b>Hydrophytic Vegetation Indicators:</b>				
<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation				
<input type="checkbox"/> 2 - Dominance Test is >50%				
<input type="checkbox"/> 3 - Prevalence Index is $\leq 3.0^1$				
<input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)				
<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)				
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
<b>Definitions of Four Vegetation Strata:</b>				
<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.				
<b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.				
<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.				
<b>Woody vine</b> – All woody vines greater than 3.28 ft in height.				
<b>Hydrophytic Vegetation Present?</b> Yes _____    No <input checked="" type="checkbox"/>				
Remarks: (Include photo numbers here or on a separate sheet.)				

**SOIL**

Sampling Point: nonab100

**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 <sup>1</sup>	Loc <sup>2</sup>		
0-7	10YR 5/6	100					SL	
7-12	10YR 4/4						SCL	

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

**Hydric Soil Indicators:**

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

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

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) **(MLRA 147)**
- Coast Prairie Redox (A16) **(MLRA 147, 148)**
- Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present?    Yes \_\_\_\_\_    No

Remarks:





**Photo 1**  
Non-water point nonab100 facing east



**Photo 2**  
Non-water point nonab100 facing south

**WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region**

Project/Site: ACP City/County: Nash Sampling Date: 7/30/14  
 Applicant/Owner: DOMINION State: NC Sampling Point: nonao001  
 Investigator(s): ESI-K. MURPHY Section, Township, Range: NA  
 Landform (hillslope, terrace, etc.): HILLSLOPE Local relief (concave, convex, none): CONVEX Slope (%): 2-4  
 Subregion (LRR or MLRA): LRRP Lat: 35.81449 Long: -78.03644 Datum: NAD83  
 Soil Map Unit Name: Rains sandy loam NWI classification: NA

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

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

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

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply) <table style="width:100%; border: none;"> <tr> <td style="width:50%; border: none;"><input type="checkbox"/> Surface Water (A1)</td> <td style="width:50%; border: none;"><input type="checkbox"/> Aquatic Fauna (B13)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> High Water Table (A2)</td> <td style="border: none;"><input type="checkbox"/> Marl Deposits (B15) (LRR U)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Saturation (A3)</td> <td style="border: none;"><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Water Marks (B1)</td> <td style="border: none;"><input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Sediment Deposits (B2)</td> <td style="border: none;"><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Drift Deposits (B3)</td> <td style="border: none;"><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Algal Mat or Crust (B4)</td> <td style="border: none;"><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Iron Deposits (B5)</td> <td style="border: none;"><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td></td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Water-Stained Leaves (B9)</td> <td></td> </tr> </table>	<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Water-Stained Leaves (B9)		<b>Secondary Indicators (minimum of two required)</b> <table style="width:100%; border: none;"> <tr><td><input type="checkbox"/> Surface Soil Cracks (B6)</td></tr> <tr><td><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</td></tr> <tr><td><input type="checkbox"/> Drainage Patterns (B10)</td></tr> <tr><td><input type="checkbox"/> Moss Trim Lines (B16)</td></tr> <tr><td><input type="checkbox"/> Dry-Season Water Table (C2)</td></tr> <tr><td><input type="checkbox"/> Crayfish Burrows (C8)</td></tr> <tr><td><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</td></tr> <tr><td><input type="checkbox"/> Geomorphic Position (D2)</td></tr> <tr><td><input type="checkbox"/> Shallow Aquitard (D3)</td></tr> <tr><td><input type="checkbox"/> FAC-Neutral Test (D5)</td></tr> <tr><td><input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)</td></tr> </table>	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)	<input type="checkbox"/> FAC-Neutral Test (D5)	<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)																															
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)																															
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)																															
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)																															
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)																															
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)																															
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)																															
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)																															
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)																																
<input type="checkbox"/> Water-Stained Leaves (B9)																																
<input type="checkbox"/> Surface Soil Cracks (B6)																																
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)																																
<input type="checkbox"/> Drainage Patterns (B10)																																
<input type="checkbox"/> Moss Trim Lines (B16)																																
<input type="checkbox"/> Dry-Season Water Table (C2)																																
<input type="checkbox"/> Crayfish Burrows (C8)																																
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)																																
<input type="checkbox"/> Geomorphic Position (D2)																																
<input type="checkbox"/> Shallow Aquitard (D3)																																
<input type="checkbox"/> FAC-Neutral Test (D5)																																
<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)																																
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>NA</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>720"</u> Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>720"</u>	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																															
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:																																
Remarks:																																



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

Sampling Point: nonao001

Tree Stratum (Plot size: <u>30' X 30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Liquidambar styraciflua</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A)  Total Number of Dominant Species Across All Strata: <u>6</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. <u>Pinus taeda</u>	<u>50</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Quercus falcata</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
4. <u>Liriodendron tulipifera</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
5. <u>Prunus serotina</u>	<u>1</u>	<u>N</u>	<u>FACU</u>	
6. _____				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
7. _____				
8. _____				
$\frac{81}{100} = \text{Total Cover}$ 50% of total cover: <u>40.5</u> 20% of total cover: <u>16.2</u>				
<b>Sapling/Shrub Stratum (Plot size: <u>15' X 15'</u>)</b>				
1. <u>Liquidambar styraciflua</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. <u>Quercus nigra</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
3. _____				
4. _____				
5. _____				
$\frac{15}{100} = \text{Total Cover}$ 50% of total cover: <u>7.5</u> 20% of total cover: <u>3</u>				
<b>Herb Stratum (Plot size: <u>5 X 5</u>)</b>				
1. <u>none</u>				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				
3. _____				
4. _____				
5. _____				
$\frac{0}{100} = \text{Total Cover}$ 50% of total cover: _____ 20% of total cover: _____				
<b>Woody Vine Stratum (Plot size: <u>30' X 30'</u>)</b>				
1. <u>Smilax rotundifolia</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
2. <u>Vitis rotundifolia</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	
3. _____				
4. _____				
5. _____				
$\frac{10}{100} = \text{Total Cover}$ 50% of total cover: <u>5</u> 20% of total cover: <u>1</u>				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____				
Remarks: (If observed, list morphological adaptations below).				

SOIL

Sampling Point: nonao001

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 <sup>1</sup>	Loc <sup>2</sup>		
0-10	10YR5/4	100					LS	
10-20	10YR5/3	80	10YR5/4	20			S	mixed matrix

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

<p><b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b></p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)</p> <p><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)</p> <p><input type="checkbox"/> Muck Presence (A8) (LRR U)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)</p>	<p><b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b></p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR O)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR S)</p> <p><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)</p> <p><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p><sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
---	---

<p><b>Restrictive Layer (if observed):</b></p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/></p>
<p>Remarks:</p>	



*Environmental Field Surveys*  
*Non-Waterbody Photo Page*



**Non-waterbody nonao001 facing west  
(NWI, not wetland)**

**WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region**

Project/Site: ACP City/County: Wilson Co. Sampling Date: 7 July 2014  
 Applicant/Owner: Dominion State: NC Sampling Point: nowio001  
 Investigator(s): J. Gray Section, Township, Range: NA  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Flat Slope (%): >1  
 Subregion (LRR or MLRA): P Lat: 35.74617 Long: 78.06992 Datum: NAD83  
 Soil Map Unit Name: Wedowee coarse sandy loam NWI classification: NA  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: <u>NWI mapping indicates PFO wetland, lacks hydrology</u>	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
---	--

<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>NA</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;30</u> Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>&gt;30</u>	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
---	--

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

Remarks:

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

Sampling Point: nowio001

Tree Stratum (Plot size: <u>30x30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Morus rubra</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)
2. <u>Liquidambar tulipifera</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	Total Number of Dominant Species Across All Strata: <u>7</u> (B)
3. <u>Aralia spinosa</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>72</u> (A/B)
4. <u>Ligustrum sinense</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
5. _____				
6. _____				
7. _____				
8. _____				
<u>70</u> = Total Cover 50% of total cover: <u>35</u> 20% of total cover: <u>14</u>				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
<u>90</u> = Total Cover 50% of total cover: <u>45</u> 20% of total cover: <u>18</u>				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
<b>Sapling/Shrub Stratum (Plot size: <u>15x15</u>)</b>				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Ligustrum sinense</u>	<u>60</u>	<u>Y</u>	<u>FAC</u>	<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
2. <u>Aralia spinosa</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Liquidambar styraciflua</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
4. <u>Morus rubra</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>90</u> = Total Cover 50% of total cover: <u>45</u> 20% of total cover: <u>18</u>				
<b>Herb Stratum (Plot size: <u>5x5</u>)</b>				
1. <u>Rubus argutus</u>	<u>2</u>	<u>N</u>	<u>FAC</u>	
2. <u>Aralia spinosa</u>	<u>1</u>	<u>N</u>	<u>FAC</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>3</u> = Total Cover 50% of total cover: <u>1.5</u> 20% of total cover: <u>.6</u>				
<b>Woody Vine Stratum (Plot size: <u>15x15</u>)</b>				
1. <u>Smilax rotundifolia</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Vitis rotundifolia</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Lonicera japonica</u>	<u>1</u>	<u>N</u>	<u>FAC</u>	
4. _____				
5. _____				
<u>16</u> = Total Cover 50% of total cover: <u>8</u> 20% of total cover: <u>3.2</u>				Hydrophytic Vegetation Present?    Yes <input checked="" type="checkbox"/> No _____
Remarks: (If observed, list morphological adaptations below).				



SOIL

Sampling Point: nowio001

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 <sup>1</sup>	Loc <sup>2</sup>		
0-24	10YR 3/1	100%					SL	27% uncoated sand
24-30	10YR 4/1	100					SL	

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

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input checked="" type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

Restrictive Layer (if observed):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

*Environmental Field Surveys*  
*Non-water Point Photo Page*



**Non-water Point nowio001 facing north.**  
(NWI, not wetland)



**Non-water Point nowio002 facing southeast.**  
(NHD – not stream, part of wetland wwio008)

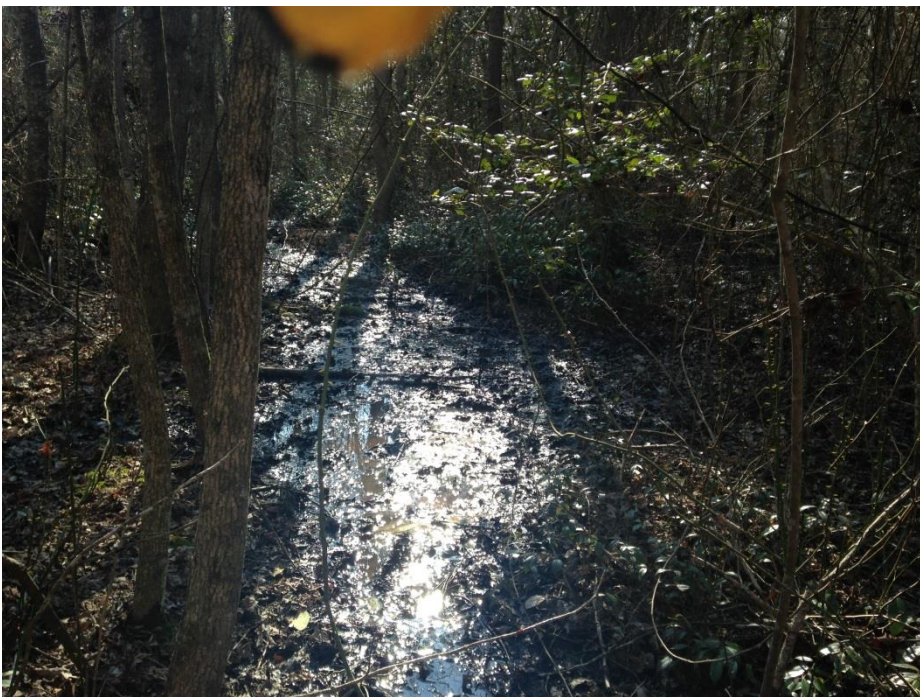


**Non-water Point nowio002 facing east.**  
(NHD – not stream, part of wetland wwio008)





Non-water data point NOWIA001 facing northeast



Non-water data point NOWIA001 facing southwest

**WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region**

Project/Site: Atlantic Coast Pipeline City/County: Johnston Sampling Date: 1/14/2016  
 Applicant/Owner: Dominion State: NC Sampling Point: nojoe001  
 Investigator(s): CG, AS Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): toe of slope Local relief (concave, convex, none): none Slope (%): 2  
 Subregion (LRR or MLRA): \_\_\_\_\_ Lat: 35.58734528 Long: -78.20702271 Datum: \_\_\_\_\_  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

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

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

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

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1)      ___ Aquatic Fauna (B13) ___ High Water Table (A2)      ___ Marl Deposits (B15) <b>(LRR U)</b> ___ Saturation (A3)      ___ Hydrogen Sulfide Odor (C1) ___ Water Marks (B1)      ___ Oxidized Rhizospheres along Living Roots (C3) ___ Sediment Deposits (B2)      ___ Presence of Reduced Iron (C4) ___ Drift Deposits (B3)      ___ Recent Iron Reduction in Tilled Soils (C6) ___ Algal Mat or Crust (B4)      ___ Thin Muck Surface (C7) ___ Iron Deposits (B5)      ___ Other (Explain in Remarks) ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> ___ 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) <b>(LRR T, U)</b>
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	<b>Wetland Hydrology Present?</b> Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: No hydrology present	
Remarks:   	

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

Sampling Point: nojoe001

	Absolute % Cover	Dominant Species?	Indicator Status																													
<b>Tree Stratum</b> (Plot size: <u>30</u> )																																
1. <u>Liriodendron tulipifera</u>	60	Yes	FACU	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)  Total Number of Dominant Species Across All Strata: <u>6</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.66666666</u> (A/B)																												
2. <u>Liquidambar styraciflua</u>	25	Yes	FAC																													
3. <u>Acer rubrum</u>	10	No	FAC																													
4. _____																																
5. _____																																
6. _____																																
7. _____																																
8. _____																																
_____ = Total Cover 50% of total cover: <u>47.5</u> 20% of total cover: <u>19</u>				<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="text-align:right">Total % Cover of:</td> <td style="text-align:center"><u>0</u></td> <td style="text-align:right">Multiply by:</td> <td style="text-align:center"><u>0</u></td> </tr> <tr> <td>OBL species</td> <td style="text-align:center"><u>0</u></td> <td>x 1 =</td> <td style="text-align:center"><u>0</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align:center"><u>30</u></td> <td>x 2 =</td> <td style="text-align:center"><u>60</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align:center"><u>57</u></td> <td>x 3 =</td> <td style="text-align:center"><u>171</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align:center"><u>75</u></td> <td>x 4 =</td> <td style="text-align:center"><u>300</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align:center"><u>0</u></td> <td>x 5 =</td> <td style="text-align:center"><u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td style="text-align:center"><u>162</u> (A)</td> <td></td> <td style="text-align:center"><u>531</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.27</u>	Total % Cover of:	<u>0</u>	Multiply by:	<u>0</u>	OBL species	<u>0</u>	x 1 =	<u>0</u>	FACW species	<u>30</u>	x 2 =	<u>60</u>	FAC species	<u>57</u>	x 3 =	<u>171</u>	FACU species	<u>75</u>	x 4 =	<u>300</u>	UPL species	<u>0</u>	x 5 =	<u>0</u>	Column Totals:	<u>162</u> (A)		<u>531</u> (B)
Total % Cover of:	<u>0</u>	Multiply by:	<u>0</u>																													
OBL species	<u>0</u>	x 1 =	<u>0</u>																													
FACW species	<u>30</u>	x 2 =	<u>60</u>																													
FAC species	<u>57</u>	x 3 =	<u>171</u>																													
FACU species	<u>75</u>	x 4 =	<u>300</u>																													
UPL species	<u>0</u>	x 5 =	<u>0</u>																													
Column Totals:	<u>162</u> (A)		<u>531</u> (B)																													
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																																
1. <u>Ligustrum sinense</u>	10	Yes	FAC																													
2. <u>Carpinus caroliniana</u>	10	Yes	FAC																													
3. _____																																
4. _____																																
5. _____																																
6. _____																																
7. _____																																
8. _____																																
_____ = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																																
<b>Herb Stratum</b> (Plot size: <u>5</u> )																																
1. <u>Arundinaria gigantea</u>	30	Yes	FACW																													
2. <u>Lonicera japonica</u>	10	Yes	FACU																													
3. <u>Lonicera japonica</u>	10	Yes	FACU																													
4. <u>Allium canadense</u>	3	No	FACU																													
5. <u>Smilax rotundifolia</u>	2	No	FAC																													
6. <u>Smilax rotundifolia</u>	2	No	FAC																													
7. <u>Polystichum acrostichoides</u>	2	No	FACU																													
8. _____																																
9. _____																																
10. _____																																
11. _____																																
12. _____																																
_____ = Total Cover 50% of total cover: <u>23.5</u> 20% of total cover: <u>9.4</u>				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																												
<b>Woody Vine Stratum</b> (Plot size: <u>30</u> )																																
1. _____																																
2. _____																																
3. _____																																
4. _____																																
5. _____																																
_____ = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.																												
Remarks: (If observed, list morphological adaptations below).																																



**SOIL**

Sampling Point: nojoe001

**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 <sup>1</sup>	Loc <sup>2</sup>		
0-15	10 YR 4/3	98	10 YR 4/4	2	C	PL	SCL	

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

<sup>2</sup>Location: 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 O)**
- 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 Soils<sup>3</sup>:**

- 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)

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

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No

Remarks:



**Photo 1**  
Non-water data point nojoe001 facing east



**Photo 2**  
Non-water data point nojoe001 facing south



*Environmental Field Surveys*  
*Non-Waterbody Photo Page*



**Non-waterbody nojop001 facing east  
(NHD, not stream)**



**WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region**

Project/Site: ACP City/County: Johnston Sampling Date: 7-21-14  
 Applicant/Owner: Dominion State: NC Sampling Point: nojop002  
 Investigator(s): J. Harbour Section, Township, Range: NA  
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): flat Slope (%): 2  
 Subregion (LRR or MLRA): LRR P Lat: 35.53506 Long: 78.24480 Datum: WGS84  
 Soil Map Unit Name: Coventham Silt loam NWI classification: N/A  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

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

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply) <table style="width:100%; border: none;"> <tr> <td style="width:50%; border: none;"><input type="checkbox"/> Surface Water (A1)</td> <td style="width:50%; border: none;"><input type="checkbox"/> Aquatic Fauna (B13)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> High Water Table (A2)</td> <td style="border: none;"><input type="checkbox"/> Marl Deposits (B15) (LRR U)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Saturation (A3)</td> <td style="border: none;"><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Water Marks (B1)</td> <td style="border: none;"><input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Sediment Deposits (B2)</td> <td style="border: none;"><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Drift Deposits (B3)</td> <td style="border: none;"><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Algal Mat or Crust (B4)</td> <td style="border: none;"><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Iron Deposits (B5)</td> <td style="border: none;"><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td></td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Water-Stained Leaves (B9)</td> <td></td> </tr> </table>	<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Water-Stained Leaves (B9)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)																				
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)																				
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)																				
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)																				
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)																				
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)																				
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)																				
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)																				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)																					
<input type="checkbox"/> Water-Stained Leaves (B9)																					
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>NA</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <span style="background-color: black; color: black;">██████████</span> Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <span style="background-color: black; color: black;">██████████</span>	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:																					
Remarks:																					

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

Sampling Point: nojop002

Tree Stratum (Plot size: <u>30'x30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Liriodendron tulipifera</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>8</u> (A)	
2. <u>Magnolia virginiana</u>	<u>5</u>	<u>N</u>	<u>FACW</u>		
3. <u>Pinus taeda</u>	<u>5</u>	<u>N</u>	<u>FAC</u>		
4. <u>Acer rubrum</u>	<u>10</u>	<u>N</u>	<u>FAC</u>		
5. _____				Total Number of Dominant Species Across All Strata: <u>8</u> (B)	
6. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)	
7. _____					
8. _____					
<u>100</u> = Total Cover				Prevalence Index worksheet:	
50% of total cover: <u>30</u> 20% of total cover: <u>12</u>					
Sapling/Shrub Stratum (Plot size: <u>30'x30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:	
1. <u>Alethra cuneifolia</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____	
2. <u>Ligustrum sinense</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>		
3. <u>Magnolia virginiana</u>	<u>5</u>	<u>N</u>	<u>FACW</u>		
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
<u>45</u> = Total Cover				Hydrophytic Vegetation Indicators:	
50% of total cover: <u>22.5</u> 20% of total cover: <u>9</u>					
Herb Stratum (Plot size: <u>30'x30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:	
1. <u>Arundinaria gigantea</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
2. <u>Woodwardia areolata</u>	<u>5</u>	<u>Y</u>	<u>OBI</u>		
3. <u>Microstegium vimineum</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>		
4. _____					
5. _____				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  <b>Definitions of Four Vegetation Strata:</b>  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 (1 m) tall.  Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  Woody vine – All woody vines greater than 3.28 ft in height.	
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
<u>15</u> = Total Cover					Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
50% of total cover: <u>7.5</u> 20% of total cover: <u>3</u>					
Woody Vine Stratum (Plot size: <u>30'x30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status		Hydrophytic Vegetation Present?
1. <u>Lonicera japonica</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>		Yes <input checked="" type="checkbox"/> No _____
2. <u>Toxicodendron radicans</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>		
3. _____					
4. _____					
5. _____					
<u>15</u> = Total Cover					
50% of total cover: <u>7.5</u> 20% of total cover: <u>3</u>					
Remarks: (If observed, list morphological adaptations below).					

SOIL

Sampling Point: nojop002

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 <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 4/3	100					SL	
8-20	10YR 5/2	90	10YR 5/6	10	C	M	SL	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) <input type="checkbox"/> Muck Presence (A8) (LRR U) <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U) <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Marl (F10) (LRR U) <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)
<input type="checkbox"/> 1 cm Muck (A9) (LRR O) <input type="checkbox"/> 2 cm Muck (A10) (LRR S) <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:





**Non-waterbody nojop002 facing north**



NC Division of Water Quality – Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.11

NC DWQ Stream Identification Form Version 4.11

NOJOB011

Date: 8/1/14	Project/Site:	Latitude:
Evaluator:	County:	Longitude:
Total Points: Stream is at least intermittent if $\geq 19$ or perennial if $\geq 30^*$ 12.5	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name:

A. Geomorphology (Subtotal = 4)

	Absent	Weak	Moderate	Strong
1 <sup>a</sup> 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	No = 0		Yes = 3	

<sup>a</sup> artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 4.5)

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	

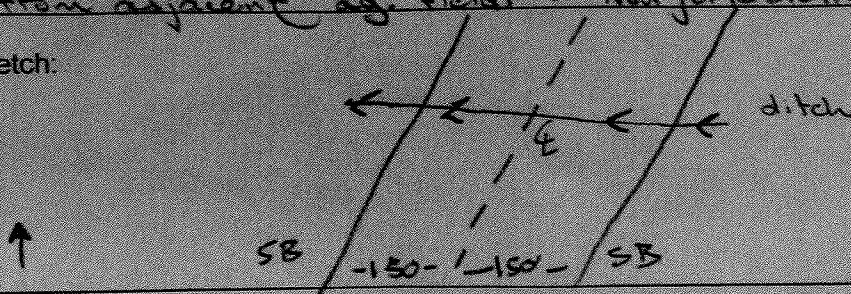
C. Biology (Subtotal = 4)

18. Fibrous roots in streambed	3	2	1	0
19. Rooted upland plants in streambed	3	2	1	0
20. Macroinvertebrates (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			

\*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: - Upper segment of Millly branch - dug ditch conveying stormwater from adjacent ag. fields - Non-jurisdictional ditch dug in 'high' ground  
Substrate consist of mud

Sketch:







Non-water point NOJOB011 facing northwest





Non-water point **NOJOB010** facing south

**NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.11**

NJ03009

**NC DWQ Stream Identification Form Version 4.11**

<b>Date:</b> 7/31/14	<b>Project/Site:</b> SERP/Dominion	<b>Latitude:</b> 35.480278
<b>Evaluator:</b> Tom Preuninger	<b>County:</b> Johnston	<b>Longitude:</b> 78.304444
<b>Total Points:</b> Stream is at least intermittent if $\geq 19$ or perennial if $\geq 30^*$ 13.25	<b>Stream Determination (circle one)</b> Ephemeral Intermittent Perennial	<b>Other</b> e.g. Quad Name:

**A. Geomorphology** (Subtotal = 3.5)

	Absent	Weak	Moderate	Strong
1 <sup>a</sup> . 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	No = 0		Yes = 3	

<sup>a</sup> 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	0.5	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. Macroinvertebrates (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			

\*perennial streams may also be identified using other methods. See p. 35 of manual.

**Notes:** Drainage swale (dug) conveying water from adjacent field

**Sketch:** N/A



Non-water point NOJOB009 facing southeast



*Environmental Field Surveys*  
*Non-water Point Photo Page*



**Non-water point nojoo002 facing south.  
(NHD, not stream)**



**Non-water point nojoo002 facing north.  
(NHD, not stream)**



*Environmental Field Surveys*  
*Non-water Point Photo Page*



**Non-water point nojoo003 facing southeast.  
(NHD, not stream)**



**Non-water point nojoo003 facing northwest.  
(NHD, not stream)**





Non-water data point NOJOE002 facing northwest  
(within inundated wetland)



Non-water data point NOJOE002 facing southeast  
(within inundated wetland)





Non-water point NOJOB006 facing southeast



Non-water point NOJOB005 facing north



Non-water point NOJOB004 facing north





Non-water point NOJOB007 facing east



Non-water point NOJOB003 facing north

**NC Division of Water Quality –Methodology for Identification of Intermittent and Perennial Streams and Their Origins v. 4.11**

**NC DWQ Stream Identification Form Version 4.11**

NOJOB002

Date: 7/28/14	Project/Site: SERP / Dominion	Latitude: 35.390833
Evaluator: Todd Prewinger	County: Johnston County	Longitude: 78.370278
<b>Total Points:</b> Stream is at least intermittent if $\geq 19$ or perennial if $\geq 30^*$ 13	<b>Stream Determination (circle one)</b> Ephemeral Intermittent Perennial	<b>Other</b> e.g. Quad Name:

see notes - drainage pattern in wetland

A. Geomorphology (Subtotal = 5)	Absent	Weak	Moderate	Strong
1 <sup>a</sup> 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	No = 0		Yes = 3	

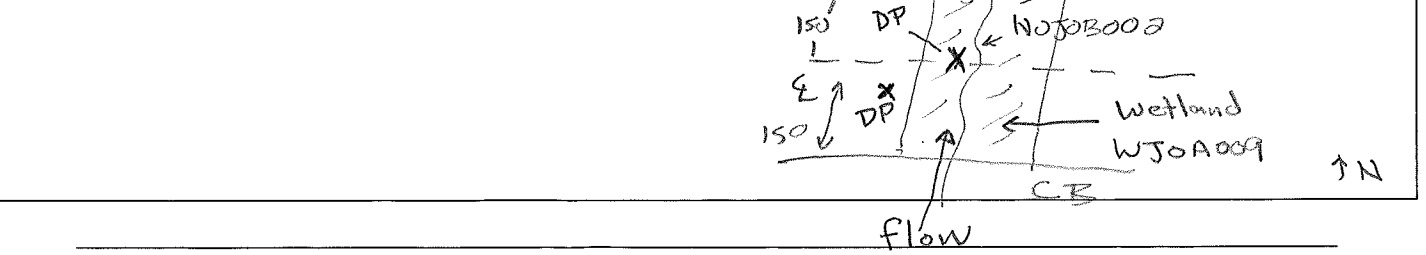
<sup>a</sup>artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 5)	Absent	Weak	Moderate	Strong
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 = 3)	Absent	Weak	Moderate	Strong
18. Fibrous roots in streambed	3	2	1	0
19. Rooted upland plants in streambed	3	2	1	0
20. Macroinvertebrates (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			

\*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: Stream depicted on USGS - actually multiple drainage patterns in wetland  
 Evaluated main flow pattern for subjectivity to buffers. Note - Heavy rains in last 24 hours, no water present







Non-water point NOJOB002 facing north



Non-water point NOJOB001 facing southeast





Non-water point NOJOB101 facing east



Non-water point NOJOB101 facing north





Non-water data point NOJOE003 facing north  
(within inundated wetland)



Non-water data point NOJOE003 facing south  
(within inundated wetland)





Waterbody NOJOB100 facing north





Non-water data point NOJOE005 facing northwest  
(within inundated wetland)



Non-water data point NOJOE005 facing southeast  
(within inundated wetland)



*Environmental Field Surveys*  
*Non-water Point Photo Page*



**Non-water point nojq001 facing north.  
(NHD, not stream)**



**Non-water point nojq001 facing south.  
(NHD, not stream)**





Non-water data point NOJOA002 facing east



Non-water data point NOJOA002 facing west





**Non-water point nojq002 facing east.  
(NHD feature, not a stream)**



**Non-water point nojq002 facing west.  
(NHD feature, not a stream)**



*Environmental Field Surveys*  
*Non-Waterbody Photo Page*



**Non-Waterbody nosao004 facing northwest.**



**Non-Waterbody nosao004 facing southeast.**



*Environmental Field Surveys*  
*Non-Waterbody Photo Page*



**Non-Waterbody nosao004 facing northeast.**

*Environmental Field Surveys*  
*Non-Waterbody Photo Page*



**Non-Waterbody nosao003 facing northwest.**



**Non-Waterbody nosao003 facing southeast.**