

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

Project/Site: Atlantic Coast Pipeline City/County: Suffolk Sampling Date: 2/20/2015  
 Applicant/Owner: Dominion State: VA Sampling Point: wsua021f\_w2  
 Investigator(s): GB, CC Section, Township, Range: No PLSS in this area  
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): microtopography Slope (%): 1  
 Subregion (LRR or MLRA): T Lat: 36.63441175 Long: -76.87470655 Datum: WGS 1984  
 Soil Map Unit Name: Weston fine sandy loam NWI classification: None

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 checked="" type="checkbox"/> No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Wetland data point taken on a disturbed flat for a seasonally saturated/seasonally surface saturated PFO wetland mosaic.	

**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) <b>(LRR U)</b> <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)	<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"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) <b>(LRR T, U)</b>
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>18</u> Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: surface saturated from 0 to 8 inches; saturation associated with water table at 17"	

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

Sampling Point: wsua021f\_w2

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Liquidambar styraciflua</u>	<u>35</u>	Yes	FAC	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A)  Total Number of Dominant Species Across All Strata: <u>8</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>87.5</u> (A/B)
2. <u>Pinus taeda</u>	<u>35</u>	Yes	FAC	
3. <u>Platanus occidentalis</u>	<u>10</u>	No	FACW	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
<u>80</u> = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: <u>8</u> Multiply by: _____ OBL species <u>8</u> x 1 = <u>8</u> FACW species <u>26</u> x 2 = <u>52</u> FAC species <u>104</u> x 3 = <u>312</u> FACU species <u>8</u> x 4 = <u>32</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>146</u> (A) <u>404</u> (B)  Prevalence Index = B/A = <u>2.76</u>
50% of total cover: <u>40</u>		20% of total cover: <u>16</u>		
Sapling/Shrub Stratum (Plot size: <u>15</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Liquidambar styraciflua</u>	<u>15</u>	Yes	FAC	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. <u>Platanus occidentalis</u>	<u>12</u>	Yes	FACW	
3. <u>Morella cerifera</u>	<u>7</u>	No	FAC	
4. <u>Acer rubrum</u>	<u>5</u>	No	FAC	
5. <u>Pinus taeda</u>	<u>5</u>	No	FAC	
6. <u>Liriodendron tulipifera</u>	<u>4</u>	No	FACU	
7. _____				
8. _____				
<u>48</u> = Total Cover				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
50% of total cover: <u>24</u>		20% of total cover: <u>9.6</u>		
Herb Stratum (Plot size: <u>5</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Woodwardia areolata</u>	<u>8</u>	Yes	OBL	<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>Osmundastrum cinnamomeum</u>	<u>4</u>	Yes	FACW	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>12</u> = Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
50% of total cover: <u>6</u>		20% of total cover: <u>2.4</u>		
Woody Vine Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Lonicera japonica</u>	<u>4</u>	Yes	FACU	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
2. <u>Smilax rotundifolia</u>	<u>2</u>	Yes	FAC	
3. _____				
4. _____				
5. _____				
<u>6</u> = Total Cover				
50% of total cover: <u>3</u>		20% of total cover: <u>1.2</u>		
Remarks: (If observed, list morphological adaptations below). Herb ID limited due to snow cover and dormancy				



**SOIL**

Sampling Point: wsua021f\_w2

**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	10YR 2/1	100					SL	
15-20	10YR 4/2	100					SL	
20-26	10YR 4/6	100					LS	

<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: none  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:



**Photo 1**  
Wetland data point wsua021f\_w2 facing north



**Photo 2**  
Wetland data point wsua021f\_w2 facing south

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

Project/Site: Atlantic Coast Pipeline City/County: Suffolk Sampling Date: 2/20/2015  
 Applicant/Owner: Dominion State: VA Sampling Point: wsua021\_u2  
 Investigator(s): GB, CC Section, Township, Range: No PLSS in this area  
 Landform (hillslope, terrace, etc.): gentle slope Local relief (concave, convex, none): none Slope (%): 2  
 Subregion (LRR or MLRA): T Lat: 36.63433919 Long: -76.87491587 Datum: WGS 1984  
 Soil Map Unit Name: Weston fine sandy loam NWI classification: None

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"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Upland data point taken on a gentle slope for a seasonally saturated to seasonally saturated PFO mosaic on a disturbed flat.	

### 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) <b>(LRR U)</b> <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)	<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"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) <b>(LRR T, U)</b>
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>24</u> Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Surface saturation present in to 5 inches; water table associated saturation is at 21 inches	

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

Sampling Point: wsua021\_u2

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u><i>Pinus taeda</i></u>	55	Yes	FAC	<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>7</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>57.14285714</u> (A/B)																
2. <u><i>Liriodendron tulipifera</i></u>	8	No	FACU																	
3. <u><i>Liquidambar styraciflua</i></u>	7	No	FAC																	
4. <u><i>Acer rubrum</i></u>	4	No	FAC																	
5. _____																				
6. _____																				
7. _____																				
8. _____																				
<u>74</u> = Total Cover 50% of total cover: <u>37</u> 20% of total cover: <u>14.8</u>				<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:right;">Total % Cover of:</td> <td style="width:50%; text-align:right;">Multiply by:</td> </tr> <tr> <td>OBL species <u>2</u></td> <td>x 1 = <u>2</u></td> </tr> <tr> <td>FACW species <u>3</u></td> <td>x 2 = <u>6</u></td> </tr> <tr> <td>FAC species <u>104</u></td> <td>x 3 = <u>312</u></td> </tr> <tr> <td>FACU species <u>32</u></td> <td>x 4 = <u>128</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>141</u> (A)</td> <td><u>448</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.17</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>2</u>	x 1 = <u>2</u>	FACW species <u>3</u>	x 2 = <u>6</u>	FAC species <u>104</u>	x 3 = <u>312</u>	FACU species <u>32</u>	x 4 = <u>128</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>141</u> (A)	<u>448</u> (B)	Prevalence Index = B/A = <u>3.17</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>2</u>	x 1 = <u>2</u>																			
FACW species <u>3</u>	x 2 = <u>6</u>																			
FAC species <u>104</u>	x 3 = <u>312</u>																			
FACU species <u>32</u>	x 4 = <u>128</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>141</u> (A)	<u>448</u> (B)																			
Prevalence Index = B/A = <u>3.17</u>																				
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																				
1. <u><i>Liquidambar styraciflua</i></u>	20	Yes	FAC																	
2. <u><i>Morella cerifera</i></u>	6	No	FAC																	
3. <u><i>Liriodendron tulipifera</i></u>	5	No	FACU																	
4. <u><i>Platanus occidentalis</i></u>	3	No	FACW																	
5. <u><i>Ilex opaca</i></u>	3	No	FAC																	
6. <u><i>Acer rubrum</i></u>	3	No	FAC																	
7. _____																				
8. _____																				
<u>40</u> = Total Cover 50% of total cover: <u>20</u> 20% of total cover: <u>8</u>																				
<b>Herb Stratum (Plot size: <u>5</u> )</b>																				
1. <u><i>Woodwardia areolata</i></u>	2	Yes	OBL																	
2. <u><i>Polystichum acrostichoides</i></u>	2	Yes	FACU																	
3. <u><i>Asplenium platyneuron</i></u>	2	Yes	FACU																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
<u>6</u> = Total Cover 50% of total cover: <u>3</u> 20% of total cover: <u>1.2</u>																				
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																				
1. <u><i>Lonicera japonica</i></u>	15	Yes	FACU																	
2. <u><i>Smilax rotundifolia</i></u>	6	Yes	FAC																	
3. _____																				
4. _____																				
5. _____																				
<u>21</u> = Total Cover 50% of total cover: <u>10.5</u> 20% of total cover: <u>4.2</u>																				
Remarks: (If observed, list morphological adaptations below). herb ID limited due to snow cover and dormancy				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																
<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.																				

**SOIL**

Sampling Point: wsua021\_u2

**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>		
0-2	10YR 2/1	100					SL	
2-6	10YR 2/2	100					SL	
6-13	10YR 3/2	100					SL	
13-24	10YR 5/6	100					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: none  
 Depth (inches): \_\_\_\_\_

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

Remarks:





**Photo 1**  
Upland data point wsua021\_u2 facing east



**Photo 2**  
Upland data point wsua021\_u2 facing west

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

Project/Site: Atlantic Coast Pipeline City/County: Suffolk Sampling Date: 2/19/2015  
 Applicant/Owner: Dominion State: VA Sampling Point: wsua020f\_w  
 Investigator(s): GB, CC Section, Township, Range: No PLSS in this area  
 Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): concave Slope (%): 2  
 Subregion (LRR or MLRA): T Lat: 36.63417795 Long: -76.87274573 Datum: WGS 1984  
 Soil Map Unit Name: Dragston fine sandy loam NWI classification: None

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 checked="" type="checkbox"/> No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Wetland data point for a seasonally saturated PFO wetland along stream ssua005.	

### 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) <b>(LRR U)</b> <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) <b>(LRR T, U)</b>
<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): _____	<b>Wetland Hydrology Present?</b> 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: wsua020f\_w

	Absolute % Cover	Dominant Species?	Indicator Status																																									
<b>Tree Stratum</b> (Plot size: <u>30</u> )																																												
1. <u>Liquidambar styraciflua</u>	40	Yes	FAC	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A)  Total Number of Dominant Species Across All Strata: <u>8</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>87.5</u> (A/B)																																								
2. <u>Acer rubrum</u>	23	Yes	FAC																																									
3. <u>Nyssa sylvatica</u>	7	No	FAC																																									
4. _____																																												
5. _____																																												
6. _____																																												
7. _____																																												
8. _____																																												
_____ = Total Cover 50% of total cover: <u>35</u> 20% of total cover: <u>14</u>				<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="width:50%;"></td> <td style="width:10%; text-align:center;">Total % Cover of:</td> <td style="width:10%;"></td> <td style="width:10%; text-align:center;">Multiply by:</td> <td style="width:15%;"></td> </tr> <tr> <td>OBL species</td> <td style="text-align:center;"><u>14</u></td> <td></td> <td style="text-align:center;">x 1 =</td> <td style="text-align:center;"><u>14</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align:center;"><u>1</u></td> <td></td> <td style="text-align:center;">x 2 =</td> <td style="text-align:center;"><u>2</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align:center;"><u>96</u></td> <td></td> <td style="text-align:center;">x 3 =</td> <td style="text-align:center;"><u>288</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align:center;"><u>23</u></td> <td></td> <td style="text-align:center;">x 4 =</td> <td style="text-align:center;"><u>92</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align:center;"><u>0</u></td> <td></td> <td style="text-align:center;">x 5 =</td> <td style="text-align:center;"><u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td style="text-align:center;"><u>134</u></td> <td style="text-align:center;">(A)</td> <td></td> <td style="text-align:center;"><u>396</u> (B)</td> </tr> <tr> <td colspan="5" style="text-align:center;">Prevalence Index = B/A = <u>2.95</u></td> </tr> </table>		Total % Cover of:		Multiply by:		OBL species	<u>14</u>		x 1 =	<u>14</u>	FACW species	<u>1</u>		x 2 =	<u>2</u>	FAC species	<u>96</u>		x 3 =	<u>288</u>	FACU species	<u>23</u>		x 4 =	<u>92</u>	UPL species	<u>0</u>		x 5 =	<u>0</u>	Column Totals:	<u>134</u>	(A)		<u>396</u> (B)	Prevalence Index = B/A = <u>2.95</u>				
	Total % Cover of:		Multiply by:																																									
OBL species	<u>14</u>		x 1 =		<u>14</u>																																							
FACW species	<u>1</u>		x 2 =		<u>2</u>																																							
FAC species	<u>96</u>		x 3 =		<u>288</u>																																							
FACU species	<u>23</u>		x 4 =		<u>92</u>																																							
UPL species	<u>0</u>		x 5 =		<u>0</u>																																							
Column Totals:	<u>134</u>	(A)			<u>396</u> (B)																																							
Prevalence Index = B/A = <u>2.95</u>																																												
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																																												
1. <u>Ilex opaca</u>	8	Yes	FAC		<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																																							
2. <u>Morella cerifera</u>	5	Yes	FAC																																									
3. <u>Fagus grandifolia</u>	3	No	FACU																																									
4. <u>Clethra alnifolia</u>	1	No	FACW																																									
5. _____																																												
6. _____																																												
7. _____																																												
8. _____																																												
_____ = Total Cover 50% of total cover: <u>8.5</u> 20% of total cover: <u>3.4</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.																																								
<b>Herb Stratum</b> (Plot size: <u>5</u> )																																												
1. <u>Woodwardia areolata</u>	10	Yes	OBL			<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																																						
2. <u>Juncus effusus</u>	4	Yes	OBL																																									
3. <u>Elymus virginicus</u>	3	No	FAC																																									
4. _____																																												
5. _____																																												
6. _____																																												
7. _____																																												
8. _____																																												
9. _____																																												
10. _____																																												
11. _____																																												
12. _____																																												
_____ = Total Cover 50% of total cover: <u>8.5</u> 20% of total cover: <u>3.4</u>																																												
<b>Woody Vine Stratum</b> (Plot size: <u>30</u> )																																												
1. <u>Lonicera japonica</u>	20	Yes	FACU																																									
2. <u>Smilax rotundifolia</u>	10	Yes	FAC																																									
3. _____																																												
4. _____																																												
5. _____																																												
_____ = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u>																																												

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



**SOIL**

Sampling Point: wsua020f\_w

**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>		
0-2	10YR 2/2	100					SL	
2-15	10YR 2/1	100					SL	
15-24	10YR 3/1	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.)**

- 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: none  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:



**Photo 1**  
Wetland data point wsua020f\_w facing southwest



**Photo 2**  
Wetland data point wsua020f\_w facing northeast

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

Project/Site: Atlantic Coast Pipeline City/County: Suffolk Sampling Date: 2/19/2015  
 Applicant/Owner: Dominion State: VA Sampling Point: wsua020\_u  
 Investigator(s): GB, CC Section, Township, Range: No PLSS in this area  
 Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): none Slope (%): 3  
 Subregion (LRR or MLRA): T Lat: 36.63415083 Long: -76.87279171 Datum: WGS 1984  
 Soil Map Unit Name: Dragston fine sandy loam NWI classification: None

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"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Upland data point taken above toe of slope for a seasonally saturated PFO wetland along an intermittent stream	

**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) <b>(LRR U)</b> <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) <b>(LRR T, U)</b>
<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): _____	<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: no hydrology indicators present	



**SOIL**

Sampling Point: wsua020\_u

**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>		
0-12	10YR 2/2	100					SL	
12-18	10YR 3/2	100					SL	
18-24	10YR 4/2	100					LS	

<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: none  
 Depth (inches): \_\_\_\_\_

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

Remarks:





**Photo 1**  
Upland data point wsua020\_u facing northeast



**Photo 2**  
Upland data point wsua020\_u facing southwest

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

Project/Site: Atlantic Coast Pipeline City/County: Suffolk Sampling Date: 2/19/2015  
 Applicant/Owner: Dominion State: VA Sampling Point: wsua019s\_w  
 Investigator(s): GB, CC Section, Township, Range: No PLSS in this area  
 Landform (hillslope, terrace, etc.): shallow ditch Local relief (concave, convex, none): concave Slope (%): 1  
 Subregion (LRR or MLRA): T Lat: 36.63413881 Long: -76.87182569 Datum: WGS 1984  
 Soil Map Unit Name: Dragston fine sandy loam NWI classification: None

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 checked="" type="checkbox"/> No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Wetland data point for a seasonally surface saturated PSS wetland in a recent clear cut; receives run-off from adjacent agricultural fields. Area is a mosaic of ditches, berms, and ruts from logging activity, only about 50% of mapped area is wetland; wetland point taken in one of the numerous shallow ditches.	

### 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) <b>(LRR U)</b> <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)	<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"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) <b>(LRR T, U)</b>
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>19</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: water table associated saturation is at 18"; surface is saturated from 0 to 4"	

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

Sampling Point: wsua019s\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A)  Total Number of Dominant Species Across All Strata: <u>9</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>77.77777777</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; text-align: right;">Total % Cover of:</td> <td style="width:50%; text-align: left;">Multiply by:</td> </tr> <tr> <td>OBL species <u>15</u></td> <td>x 1 = <u>15</u></td> </tr> <tr> <td>FACW species <u>9</u></td> <td>x 2 = <u>18</u></td> </tr> <tr> <td>FAC species <u>86</u></td> <td>x 3 = <u>258</u></td> </tr> <tr> <td>FACU species <u>24</u></td> <td>x 4 = <u>96</u></td> </tr> <tr> <td>UPL species <u>8</u></td> <td>x 5 = <u>40</u></td> </tr> <tr> <td>Column Totals: <u>142</u> (A)</td> <td><u>427</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3</u></td> </tr> </table> <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)	Total % Cover of:	Multiply by:	OBL species <u>15</u>	x 1 = <u>15</u>	FACW species <u>9</u>	x 2 = <u>18</u>	FAC species <u>86</u>	x 3 = <u>258</u>	FACU species <u>24</u>	x 4 = <u>96</u>	UPL species <u>8</u>	x 5 = <u>40</u>	Column Totals: <u>142</u> (A)	<u>427</u> (B)	Prevalence Index = B/A = <u>3</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>15</u>	x 1 = <u>15</u>																			
FACW species <u>9</u>	x 2 = <u>18</u>																			
FAC species <u>86</u>	x 3 = <u>258</u>																			
FACU species <u>24</u>	x 4 = <u>96</u>																			
UPL species <u>8</u>	x 5 = <u>40</u>																			
Column Totals: <u>142</u> (A)	<u>427</u> (B)																			
Prevalence Index = B/A = <u>3</u>																				
<u>34</u> = Total Cover 50% of total cover: <u>17</u> 20% of total cover: <u>6.8</u>																				
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																				
1. <u>Rhus copallinum</u>	<u>8</u>	<u>Yes</u>	<u>UPL</u>																	
2. <u>Morella cerifera</u>	<u>7</u>	<u>Yes</u>	<u>FAC</u>																	
3. <u>Pinus taeda</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>																	
4. <u>Acer rubrum</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>																	
5. <u>Salix nigra</u>	<u>5</u>	<u>Yes</u>	<u>OBL</u>																	
6. <u>Baccharis halimifolia</u>	<u>4</u>	<u>No</u>	<u>FAC</u>																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
<u>34</u> = Total Cover 50% of total cover: <u>17</u> 20% of total cover: <u>6.8</u>																				
<b>Herb Stratum (Plot size: <u>5</u> )</b>																				
1. <u>Juncus effusus</u>	<u>10</u>	<u>Yes</u>	<u>OBL</u>																	
2. <u>Arundinaria gigantea</u>	<u>6</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Solidago altissima</u>	<u>4</u>	<u>No</u>	<u>FACU</u>																	
4. <u>Dichantherium scoparium</u>	<u>3</u>	<u>No</u>	<u>FACW</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
<u>23</u> = Total Cover 50% of total cover: <u>11.5</u> 20% of total cover: <u>4.6</u>																				
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																				
1. <u>Rubus argutus</u>	<u>55</u>	<u>Yes</u>	<u>FAC</u>																	
2. <u>Lonicera japonica</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Smilax rotundifolia</u>	<u>10</u>	<u>No</u>	<u>FAC</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
<u>85</u> = Total Cover 50% of total cover: <u>42.5</u> 20% of total cover: <u>17</u>																				
<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																				
Remarks: (If observed, list morphological adaptations below). herb ID limited due to snow cover and dormancy outside of growing season																				



**SOIL**

Sampling Point: wsua019s\_w

**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 2/1	100					SL	
4-16	10YR 3/1	100					SL	
16-24	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.)**

- 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: none  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:



**Photo 1**  
Wetland data point wsua019s\_w facing northeast



**Photo 2**  
Wetland data point wsua019s\_w facing southwest

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

Project/Site: Atlantic Coast Pipeline City/County: Suffolk Sampling Date: 2/19/2015  
 Applicant/Owner: Dominion State: VA Sampling Point: wsua019\_u  
 Investigator(s): GB, CC Section, Township, Range: No PLSS in this area  
 Landform (hillslope, terrace, etc.): berm Local relief (concave, convex, none): convex Slope (%): 2  
 Subregion (LRR or MLRA): T Lat: 36.63414791 Long: -76.87205391 Datum: WGS 1984  
 Soil Map Unit Name: Dragston fine sandy loam NWI classification: None

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 data point taken on a berm for a seasonally surface saturated PSS wetland mosaic located in a highly disturbed clear cut.	

**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) <b>(LRR U)</b> <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) <b>(LRR T, U)</b>
<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): <u>24</u> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>22</u> (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: no hydrology indicators present	

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

Sampling Point: wsua019\_u

	Absolute % Cover	Dominant Species?	Indicator Status																																	
<b>Tree Stratum</b> (Plot size: <u>30</u> )																																				
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</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>50</u> (A/B)																																
2. _____	_____	_____	_____																																	
3. _____	_____	_____	_____																																	
4. _____	_____	_____	_____																																	
5. _____	_____	_____	_____																																	
6. _____	_____	_____	_____																																	
7. _____	_____	_____	_____																																	
8. _____	_____	_____	_____																																	
_____ = Total Cover																																				
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>																																		
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																																				
1. <u>Rhus copallinum</u>	<u>35</u>	<u>Yes</u>	<u>UPL</u>	<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="text-align: right;">Total % Cover of:</td> <td style="text-align: center;">_____</td> <td style="text-align: right;">Multiply by:</td> <td style="text-align: center;">_____</td> </tr> <tr> <td>OBL species</td> <td style="text-align: center;"><u>4</u></td> <td>x 1 =</td> <td style="text-align: center;"><u>4</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>10</u></td> <td>x 2 =</td> <td style="text-align: center;"><u>20</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>79</u></td> <td>x 3 =</td> <td style="text-align: center;"><u>237</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>33</u></td> <td>x 4 =</td> <td style="text-align: center;"><u>132</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>41</u></td> <td>x 5 =</td> <td style="text-align: center;"><u>205</u></td> </tr> <tr> <td>Column Totals:</td> <td style="text-align: center;"><u>167</u></td> <td>(A)</td> <td style="text-align: center;"><u>598</u></td> </tr> <tr> <td colspan="2" style="text-align: right;">Prevalence Index = B/A =</td> <td colspan="2" style="text-align: center;"><u>3.58</u></td> </tr> </table>	Total % Cover of:	_____	Multiply by:	_____	OBL species	<u>4</u>	x 1 =	<u>4</u>	FACW species	<u>10</u>	x 2 =	<u>20</u>	FAC species	<u>79</u>	x 3 =	<u>237</u>	FACU species	<u>33</u>	x 4 =	<u>132</u>	UPL species	<u>41</u>	x 5 =	<u>205</u>	Column Totals:	<u>167</u>	(A)	<u>598</u>	Prevalence Index = B/A =		<u>3.58</u>	
Total % Cover of:	_____	Multiply by:	_____																																	
OBL species	<u>4</u>	x 1 =	<u>4</u>																																	
FACW species	<u>10</u>	x 2 =	<u>20</u>																																	
FAC species	<u>79</u>	x 3 =	<u>237</u>																																	
FACU species	<u>33</u>	x 4 =	<u>132</u>																																	
UPL species	<u>41</u>	x 5 =	<u>205</u>																																	
Column Totals:	<u>167</u>	(A)	<u>598</u>																																	
Prevalence Index = B/A =		<u>3.58</u>																																		
2. <u>Cercis canadensis</u>	<u>6</u>	<u>No</u>	<u>UPL</u>																																	
3. <u>Acer rubrum</u>	<u>5</u>	<u>No</u>	<u>FAC</u>																																	
4. <u>Prunus serotina</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																																	
5. <u>Salix nigra</u>	<u>4</u>	<u>No</u>	<u>OBL</u>																																	
6. <u>Platanus occidentalis</u>	<u>4</u>	<u>No</u>	<u>FACW</u>																																	
7. <u>Pinus taeda</u>	<u>4</u>	<u>No</u>	<u>FAC</u>																																	
8. _____	_____	_____	_____																																	
_____ = Total Cover																																				
50% of total cover: <u>31.5</u>		20% of total cover: <u>12.6</u>																																		
<b>Herb Stratum</b> (Plot size: <u>5</u> )																																				
1. <u>Dichanthelium scoparium</u>	<u>4</u>	<u>Yes</u>	<u>FACW</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 ≤3.0 <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																																
2. <u>Solidago altissima</u>	<u>3</u>	<u>Yes</u>	<u>FACU</u>																																	
3. <u>Arundinaria gigantea</u>	<u>2</u>	<u>Yes</u>	<u>FACW</u>																																	
4. _____	_____	_____	_____																																	
5. _____	_____	_____	_____																																	
6. _____	_____	_____	_____																																	
7. _____	_____	_____	_____																																	
8. _____	_____	_____	_____																																	
9. _____	_____	_____	_____																																	
10. _____	_____	_____	_____																																	
11. _____	_____	_____	_____																																	
12. _____	_____	_____	_____																																	
_____ = Total Cover																																				
50% of total cover: <u>4.5</u>		20% of total cover: <u>1.8</u>																																		
<b>Woody Vine Stratum</b> (Plot size: <u>30</u> )																																				
1. <u>Rubus argutus</u>	<u>60</u>	<u>Yes</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>Lonicera japonica</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>																																	
3. <u>Smilax rotundifolia</u>	<u>10</u>	<u>No</u>	<u>FAC</u>																																	
4. _____	_____	_____	_____																																	
5. _____	_____	_____	_____																																	
_____ = Total Cover																																				
50% of total cover: <u>47.5</u>		20% of total cover: <u>19</u>																																		
<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>																																				
Remarks: (If observed, list morphological adaptations below). herb ID limited due to snow cover and dormancy outside of growing season																																				

**SOIL**

Sampling Point: wsua019\_u

**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	10YR 2/2	100					SL	
6-15	10YR 3/2	100					SL	
15-24	10YR 3/1	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.)**

- 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: none  
 Depth (inches): \_\_\_\_\_

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

Remarks:





**Photo 1**  
Upland data point wsua019\_u facing northeast



**Photo 2**  
Upland data point wsua019\_u facing southwest

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

Project/Site: Atlantic Coast Pipeline City/County: Suffolk Sampling Date: 2/19/2015  
 Applicant/Owner: Dominion State: VA Sampling Point: wsua018s\_w  
 Investigator(s): GB, CC Section, Township, Range: No PLSS in this area  
 Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): concave Slope (%): 2  
 Subregion (LRR or MLRA): T Lat: 36.63381741 Long: -76.86961899 Datum: WGS 1984  
 Soil Map Unit Name: Nansemond fine sandy loam, 0 to 2 percent slopes NWI classification: None

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 checked="" type="checkbox"/> No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Wetland data point for a seasonally saturated swale in a recent clear cut adjacent to an agricultural field.	

**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 checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) <b>(LRR U)</b> <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)	<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) <b>(LRR T, U)</b>
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>10</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>9</u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> 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: wsua018s\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>8</u> (A)  Total Number of Dominant Species Across All Strata: <u>11</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>72.72727272</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
_____ = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; text-align: right;">Total % Cover of:</td> <td style="width:50%; text-align: left;">Multiply by:</td> </tr> <tr> <td>OBL species <u>9</u></td> <td>x 1 = <u>9</u></td> </tr> <tr> <td>FACW species <u>12</u></td> <td>x 2 = <u>24</u></td> </tr> <tr> <td>FAC species <u>74</u></td> <td>x 3 = <u>222</u></td> </tr> <tr> <td>FACU species <u>35</u></td> <td>x 4 = <u>140</u></td> </tr> <tr> <td>UPL species <u>10</u></td> <td>x 5 = <u>50</u></td> </tr> <tr> <td>Column Totals: <u>140</u> (A)</td> <td><u>445</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.17</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>9</u>	x 1 = <u>9</u>	FACW species <u>12</u>	x 2 = <u>24</u>	FAC species <u>74</u>	x 3 = <u>222</u>	FACU species <u>35</u>	x 4 = <u>140</u>	UPL species <u>10</u>	x 5 = <u>50</u>	Column Totals: <u>140</u> (A)	<u>445</u> (B)	Prevalence Index = B/A = <u>3.17</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>9</u>	x 1 = <u>9</u>																			
FACW species <u>12</u>	x 2 = <u>24</u>																			
FAC species <u>74</u>	x 3 = <u>222</u>																			
FACU species <u>35</u>	x 4 = <u>140</u>																			
UPL species <u>10</u>	x 5 = <u>50</u>																			
Column Totals: <u>140</u> (A)	<u>445</u> (B)																			
Prevalence Index = B/A = <u>3.17</u>																				
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																				
1. <u>Rhus copallinum</u>	<u>10</u>	<u>Yes</u>	<u>UPL</u>																	
2. <u>Acer rubrum</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>																	
3. <u>Sambucus nigra</u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>																	
4. <u>Liriodendron tulipifera</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>																	
5. <u>Liquidambar styraciflua</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>																	
6. <u>Populus deltoides</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>																	
7. <u>Salix nigra</u>	<u>5</u>	<u>Yes</u>	<u>OBL</u>																	
8. <u>Baccharis halimifolia</u>	<u>4</u>	<u>No</u>	<u>FAC</u>																	
_____ = Total Cover 50% of total cover: <u>22</u> 20% of total cover: <u>8.8</u>																				
<b>Herb Stratum (Plot size: <u>5</u> )</b>																				
1. <u>Arundinaria gigantea</u>	<u>7</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Scirpus cyperinus</u>	<u>4</u>	<u>Yes</u>	<u>OBL</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ = Total Cover 50% of total cover: <u>5.5</u> 20% of total cover: <u>2.2</u>																				
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																				
1. <u>Rubus argutus</u>	<u>40</u>	<u>Yes</u>	<u>FAC</u>																	
2. <u>Lonicera japonica</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Vitis rotundifolia</u>	<u>15</u>	<u>No</u>	<u>FAC</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
_____ = Total Cover 50% of total cover: <u>42.5</u> 20% of total cover: <u>17</u>																				
Remarks: (If observed, list morphological adaptations below). Herb layer ID limited due to snow cover and outside of growing season				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																
<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.																				



**SOIL**

Sampling Point: wsua018s\_w

**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	10YR 3/3	100					SL	
6-10	10YR 3/2	100					SL	
10-20	10YRV4/2	98	10YR 4/6	2	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.)**

- 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: none  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:



**Photo 1**  
Wetland data point wsua018s\_w facing south



**Photo 2**  
Wetland data point wsua018s\_w facing north

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

Project/Site: Atlantic Coast Pipeline City/County: Suffolk Sampling Date: 2/19/2015  
 Applicant/Owner: Dominion State: VA Sampling Point: wsua018\_u  
 Investigator(s): GB, CC Section, Township, Range: No PLSS in this area  
 Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): none Slope (%): 4  
 Subregion (LRR or MLRA): T Lat: 36.63368928 Long: -76.86950921 Datum: WGS 1984  
 Soil Map Unit Name: Nansemond fine sandy loam, 0 to 2 percent slopes NWI classification: None

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 data point taken above toe of slope for a seasonally saturated PSS wetland in a wet swale within a recent cutover	

**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) <b>(LRR U)</b> <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) <b>(LRR T, U)</b>
<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): _____	<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: no hydrology indicators present	

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

Sampling Point: wsua018\_u

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</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>50</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
_____ = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; text-align: right;">Total % Cover of:</td> <td style="width:50%; text-align: left;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>5</u></td> <td>x 2 = <u>10</u></td> </tr> <tr> <td>FAC species <u>75</u></td> <td>x 3 = <u>225</u></td> </tr> <tr> <td>FACU species <u>55</u></td> <td>x 4 = <u>220</u></td> </tr> <tr> <td>UPL species <u>20</u></td> <td>x 5 = <u>100</u></td> </tr> <tr> <td>Column Totals: <u>155</u> (A)</td> <td><u>555</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.58</u></td> </tr> </table> <b>Hydrophytic Vegetation Indicators:</b> ___ 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)	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>5</u>	x 2 = <u>10</u>	FAC species <u>75</u>	x 3 = <u>225</u>	FACU species <u>55</u>	x 4 = <u>220</u>	UPL species <u>20</u>	x 5 = <u>100</u>	Column Totals: <u>155</u> (A)	<u>555</u> (B)	Prevalence Index = B/A = <u>3.58</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>5</u>	x 2 = <u>10</u>																			
FAC species <u>75</u>	x 3 = <u>225</u>																			
FACU species <u>55</u>	x 4 = <u>220</u>																			
UPL species <u>20</u>	x 5 = <u>100</u>																			
Column Totals: <u>155</u> (A)	<u>555</u> (B)																			
Prevalence Index = B/A = <u>3.58</u>																				
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																				
1. <u>Liriodendron tulipifera</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Rhus copallinum</u>	<u>20</u>	<u>Yes</u>	<u>UPL</u>																	
3. <u>Liquidambar styraciflua</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>																	
4. <u>Acer rubrum</u>	<u>5</u>	<u>No</u>	<u>FAC</u>																	
5. <u>Prunus serotina</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
_____ = Total Cover 50% of total cover: <u>35</u> 20% of total cover: <u>14</u>																				
<b>Herb Stratum (Plot size: <u>5</u> )</b>																				
1. <u>Arundinaria gigantea</u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ = Total Cover 50% of total cover: <u>2.5</u> 20% of total cover: <u>1</u>																				
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																				
1. <u>Rubus argutus</u>	<u>50</u>	<u>Yes</u>	<u>FAC</u>																	
2. <u>Lonicera japonica</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Smilax rotundifolia</u>	<u>5</u>	<u>No</u>	<u>FAC</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
_____ = Total Cover 50% of total cover: <u>40</u> 20% of total cover: <u>16</u>																				
<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>																				
Remarks: (If observed, list morphological adaptations below). herb layer ID limited due to snow cover and outside of growing season																				

**SOIL**

Sampling Point: wsua018\_u

**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>		
0-3	10YR 2/2	100					SL	
3-10	10YR 4/3	100					SL	
10-24	10YR 4/4	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.)**

- 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: none  
 Depth (inches): \_\_\_\_\_

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

Remarks:





**Photo 1**  
Upland data point wsua018\_u facing south



**Photo 2**  
Upland data point wsua018\_u facing north

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

Project/Site: Atlantic Coast Pipeline City/County: Suffolk Sampling Date: 12/10/2014  
 Applicant/Owner: Dominion State: VA Sampling Point: wsua009f\_w  
 Investigator(s): GB, RL Section, Township, Range: No PLSS in this area  
 Landform (hillslope, terrace, etc.): draw Local relief (concave, convex, none): concave Slope (%): 2  
 Subregion (LRR or MLRA): T Lat: 36.63347965 Long: -76.86760044 Datum: WGS 1984  
 Soil Map Unit Name: Rains fine sandy loam NWI classification: None

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 checked="" type="checkbox"/> No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Wetland data point taken within a saturated PFO wetland located in a wet draw, intermittent stream ssua006 originates as outflow within this feature, shelf areas along stream course.	

**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 checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) <b>(LRR U)</b> <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)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" 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) <b>(LRR T, U)</b>
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>4</u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> 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: wsua009f\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Pinus taeda</i>	25	Yes	FAC
2. <i>Acer rubrum</i>	20	Yes	FAC
3. <i>Magnolia virginiana</i>	10	No	FACW
4. <i>Liriodendron tulipifera</i>	10	No	FACU
5. <i>Liquidambar styraciflua</i>	10	No	FAC
6. _____			
7. _____			
8. _____			

75 = Total Cover  
50% of total cover: 37.5    20% of total cover: 15

Sapling/Shrub Stratum (Plot size: <u>15</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Ilex opaca</i>	15	Yes	FAC
2. <i>Magnolia virginiana</i>	10	Yes	FACW
3. <i>Symplocos tinctoria</i>	8	Yes	FAC
4. <i>Acer rubrum</i>	7	No	FAC
5. _____			
6. _____			
7. _____			
8. _____			

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

Herb Stratum (Plot size: <u>5</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Arundinaria gigantea</i>	15	Yes	FACW
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			

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

Woody Vine Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Smilax rotundifolia</i>	5	Yes	FAC
2. _____			
3. _____			
4. _____			
5. _____			

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

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

**Dominance Test worksheet:**

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

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

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

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>35</u>	x 2 = <u>70</u>
FAC species <u>90</u>	x 3 = <u>270</u>
FACU species <u>10</u>	x 4 = <u>40</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>135</u> (A)	<u>380</u> (B)

Prevalence Index = B/A = 2.81

- 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



**SOIL**

Sampling Point: wsua009f\_w

**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 2/1	100					L	
8-18	10YR 3/1	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.)**

- 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: none  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:



**Photo 1**  
Wetland data point wsua009f\_w facing south



**Photo 2**  
Wetland data point wsua009f\_w facing west

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

Project/Site: Atlantic Coast Pipeline City/County: Suffolk Sampling Date: 12/10/2014  
 Applicant/Owner: Dominion State: VA Sampling Point: wsua009\_u  
 Investigator(s): GB, RL Section, Township, Range: No PLSS in this area  
 Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): none Slope (%): 2  
 Subregion (LRR or MLRA): T Lat: 36.63352951 Long: -76.86755132 Datum: WGS 1984  
 Soil Map Unit Name: Rains fine sandy loam NWI classification: None

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 data point taken above toe of slope for a saturated PFO wetland located in a wet draw.	

**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) <b>(LRR U)</b> <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) <b>(LRR T, U)</b>
<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): _____	<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: no hydrology indicators present	

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

Sampling Point: wsua009\_u

	Absolute % Cover	Dominant Species?	Indicator Status																	
<b>Tree Stratum</b> (Plot size: <u>30</u> )																				
1. <u><i>Pinus taeda</i></u>	30	Yes	FAC	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>7</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>42.85714285</u> (A/B)																
2. <u><i>Liriodendron tulipifera</i></u>	15	Yes	FACU																	
3. <u><i>Quercus alba</i></u>	12	No	FACU																	
4. <u><i>Acer rubrum</i></u>	10	No	FAC																	
5. <u><i>Liquidambar styraciflua</i></u>	8	No	FAC																	
6. <u><i>Fagus grandifolia</i></u>	5	No	FACU																	
7. _____																				
8. _____																				
<u>80</u> = Total Cover 50% of total cover: <u>40</u> 20% of total cover: <u>16</u>				<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:right">Total % Cover of:</td> <td style="width:50%; text-align:right">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>7</u></td> <td>x 2 = <u>14</u></td> </tr> <tr> <td>FAC species <u>66</u></td> <td>x 3 = <u>198</u></td> </tr> <tr> <td>FACU species <u>57</u></td> <td>x 4 = <u>228</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>130</u> (A)</td> <td><u>440</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center">Prevalence Index = B/A = <u>3.38</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>7</u>	x 2 = <u>14</u>	FAC species <u>66</u>	x 3 = <u>198</u>	FACU species <u>57</u>	x 4 = <u>228</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>130</u> (A)	<u>440</u> (B)	Prevalence Index = B/A = <u>3.38</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>7</u>	x 2 = <u>14</u>																			
FAC species <u>66</u>	x 3 = <u>198</u>																			
FACU species <u>57</u>	x 4 = <u>228</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>130</u> (A)	<u>440</u> (B)																			
Prevalence Index = B/A = <u>3.38</u>																				
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																				
1. <u><i>Fagus grandifolia</i></u>	15	Yes	FACU	<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 ≤3.0 <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																
2. <u><i>Ilex opaca</i></u>	10	Yes	FAC																	
3. <u><i>Oxydendrum arboreum</i></u>	8	Yes	FACU																	
4. <u><i>Symplocos tinctoria</i></u>	7	No	FAC																	
5. _____																				
6. _____																				
7. _____																				
8. _____																				
<u>40</u> = Total Cover 50% of total cover: <u>20</u> 20% of total cover: <u>8</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.																
<b>Herb Stratum</b> (Plot size: <u>5</u> )																				
1. <u><i>Arundinaria gigantea</i></u>	7	Yes	FACW		<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>															
2. <u><i>Mitchella repens</i></u>	2	Yes	FACU																	
3. <u><i>Hexastylis arifolia</i></u>	1	No	FAC																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
<u>10</u> = Total Cover 50% of total cover: <u>5</u> 20% of total cover: <u>2</u>																				
<b>Woody Vine Stratum</b> (Plot size: <u>30</u> )																				
1. _____				_____ _____ _____ _____ _____																
2. _____																				
3. _____																				
4. _____																				
5. _____																				
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																				
Remarks: (If observed, list morphological adaptations below).																				

**SOIL**

Sampling Point: wsua009\_u

**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 2/2	100					SL	
4-18	10YR 3/2	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.)**

- 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: none  
 Depth (inches): \_\_\_\_\_

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

Remarks:





**Photo 1**  
Upland data point wsua009\_u facing east



**Photo 2**  
Upland data point wsua009\_u facing north





**Photo 3**  
Upland data point wsua009\_u facing west

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

Project/Site: Atlantic Coast Pipeline City/County: Suffolk Sampling Date: 12/10/2014  
 Applicant/Owner: Dominion State: VA Sampling Point: wsua010f\_w  
 Investigator(s): GB, RL Section, Township, Range: No PLSS in this area  
 Landform (hillslope, terrace, etc.): draw Local relief (concave, convex, none): concave Slope (%): 1  
 Subregion (LRR or MLRA): T Lat: 36.6333526 Long: -76.86530708 Datum: WGS 1984  
 Soil Map Unit Name: Rains fine sandy loam NWI classification: PFO1E

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 checked="" type="checkbox"/> No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Wetland data point for a saturated to temporarily flooded PFO wetland located in two intersecting draws containing streams ssua007 & ssua008.	

### 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 checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) <b>(LRR U)</b> <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)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input checked="" 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 checked="" type="checkbox"/> Sphagnum moss (D8) <b>(LRR T, U)</b>
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>5</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>3</u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> 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: wsua010f\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Nyssa sylvatica</u>	20	Yes	FAC
2. <u>Liquidambar styraciflua</u>	15	Yes	FAC
3. <u>Pinus taeda</u>	15	Yes	FAC
4. <u>Liriodendron tulipifera</u>	12	No	FACU
5. <u>Magnolia virginiana</u>	8	No	FACW
6. <u>Acer rubrum</u>	5	No	FAC
7. _____			
8. _____			
	<u>75</u> = Total Cover		
	50% of total cover: <u>37.5</u>	20% of total cover: <u>15</u>	

Sapling/Shrub Stratum (Plot size: <u>15</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Magnolia virginiana</u>	16	Yes	FACW
2. <u>Ilex opaca</u>	10	Yes	FAC
3. <u>Liquidambar styraciflua</u>	5	No	FAC
4. <u>Acer rubrum</u>	5	No	FAC
5. <u>Fagus grandifolia</u>	4	No	FACU
6. _____			
7. _____			
8. _____			
	<u>40</u> = Total Cover		
	50% of total cover: <u>20</u>	20% of total cover: <u>8</u>	

Herb Stratum (Plot size: <u>5</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Arundinaria gigantea</u>	12	Yes	FACW
2. <u>Woodwardia areolata</u>	6	Yes	OBL
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			
	<u>18</u> = Total Cover		
	50% of total cover: <u>9</u>	20% of total cover: <u>3.6</u>	

Woody Vine Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
	<u>0</u> = Total Cover		
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>	

**Dominance Test worksheet:**

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

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

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

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>6</u>	x 1 = <u>6</u>
FACW species <u>36</u>	x 2 = <u>72</u>
FAC species <u>75</u>	x 3 = <u>225</u>
FACU species <u>16</u>	x 4 = <u>64</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>133</u> (A)	<u>367</u> (B)

Prevalence Index = B/A = 2.75

- 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).

**SOIL**

Sampling Point: wsua010f\_w

**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>		
0-9	10YR 2/1	100					SIL	
9-18	10YR 3/1	100					SIL	

<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: none  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:





**Photo 1**  
Wetland data point wsua010f\_w facing north



**Photo 2**  
Wetland data point wsua010f\_w facing west

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

Project/Site: Atlantic Coast Pipeline City/County: Suffolk Sampling Date: 12/10/2014  
 Applicant/Owner: Dominion State: VA Sampling Point: wsua010\_u  
 Investigator(s): GB, RL Section, Township, Range: No PLSS in this area  
 Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): none Slope (%): 4  
 Subregion (LRR or MLRA): T Lat: 36.63330875 Long: -76.86518491 Datum: WGS 1984  
 Soil Map Unit Name: Rains fine sandy loam NWI classification: None

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"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Upland data point taken above toe of slope on an upland finger between two draws containing intersecting saturated to temporarily flooded PFO wetland branches along streams.	

**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) <b>(LRR U)</b> <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) <b>(LRR T, U)</b>
<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): _____	<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: no hydrology indicators present	



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

Sampling Point: wsua010\_u

	Absolute % Cover	Dominant Species?	Indicator Status															
<b>Tree Stratum</b> (Plot size: <u>30</u> )																		
1. <u><i>Liriodendron tulipifera</i></u>	<u>25</u>	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>7</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>57.14285714</u> (A/B)														
2. <u><i>Quercus alba</i></u>	<u>20</u>	Yes	FACU															
3. <u><i>Pinus taeda</i></u>	<u>20</u>	Yes	FAC															
4. <u><i>Quercus falcata</i></u>	<u>10</u>	No	FACU															
5. _____																		
6. _____																		
7. _____																		
8. _____																		
<u>75</u> = Total Cover 50% of total cover: <u>37.5</u> 20% of total cover: <u>15</u>				<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:right">Total % Cover of:</td> <td style="width:50%; text-align:right">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>4</u></td> <td>x 2 = <u>8</u></td> </tr> <tr> <td>FAC species <u>37</u></td> <td>x 3 = <u>111</u></td> </tr> <tr> <td>FACU species <u>71</u></td> <td>x 4 = <u>284</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>112</u> (A)</td> <td><u>403</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.59</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>4</u>	x 2 = <u>8</u>	FAC species <u>37</u>	x 3 = <u>111</u>	FACU species <u>71</u>	x 4 = <u>284</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>112</u> (A)	<u>403</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>4</u>	x 2 = <u>8</u>																	
FAC species <u>37</u>	x 3 = <u>111</u>																	
FACU species <u>71</u>	x 4 = <u>284</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>112</u> (A)	<u>403</u> (B)																	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																		
1. <u><i>Fagus grandifolia</i></u>	<u>10</u>	Yes	FACU	<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><i>Ilex opaca</i></u>	<u>10</u>	Yes	FAC															
3. <u><i>Acer rubrum</i></u>	<u>5</u>	No	FAC															
4. <u><i>Oxydendrum arboreum</i></u>	<u>5</u>	No	FACU															
5. _____																		
6. _____																		
7. _____																		
8. _____																		
<u>30</u> = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</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.														
<b>Herb Stratum</b> (Plot size: <u>5</u> )																		
1. <u><i>Arundinaria gigantea</i></u>	<u>4</u>	Yes	FACW															
2. <u><i>Hexastylis arifolia</i></u>	<u>2</u>	Yes	FAC															
3. <u><i>Mitchella repens</i></u>	<u>1</u>	No	FACU															
4. _____																		
5. _____																		
6. _____																		
7. _____																		
8. _____																		
9. _____																		
10. _____																		
11. _____																		
12. _____																		
<u>7</u> = Total Cover 50% of total cover: <u>3.5</u> 20% of total cover: <u>1.4</u>				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>														
<b>Woody Vine Stratum</b> (Plot size: <u>30</u> )																		
1. _____																		
2. _____																		
3. _____																		
4. _____																		
5. _____																		
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																		
Remarks: (If observed, list morphological adaptations below).																		

**SOIL**

Sampling Point: wsua010\_u

**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 2/2	100					SL	
7-15	10YR 4/3	100					SL	
15-20	10YR 4/4	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.)**

- 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: none  
 Depth (inches): \_\_\_\_\_

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

Remarks:



**Photo 1**  
Upland data point wsua010\_u facing east



**Photo 2**  
Upland data point wsua010\_u facing south

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

Project/Site: Atlantic Coast Pipeline City/County: City of Suffolk Sampling Date: 9/16/2015  
 Applicant/Owner: Dominion State: VA Sampling Point: wsua072f\_w  
 Investigator(s): GB, SA Section, Township, Range: No PLSS in this area  
 Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): concave Slope (%): 2  
 Subregion (LRR or MLRA): T Lat: 36.64345309 Long: -76.85845971 Datum: WGS 1984  
 Soil Map Unit Name: Goldsboro fine sandy loam, 2 to 5 percent slopes, eroded NWI classification: None

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 checked="" type="checkbox"/> No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Wetland data point for a saturated to temporarily-flooded PFO wetland in a shallow swale.	

### 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) <b>(LRR U)</b> <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 checked="" 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 checked="" 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) <b>(LRR T, U)</b>
<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): _____	<b>Wetland Hydrology Present?</b> 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: wsua072f\_w

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Fraxinus pennsylvanica</u>	15	Yes	FACW	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>9</u> (A)  Total Number of Dominant Species Across All Strata: <u>11</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>81.81818181</u> (A/B)																
2. <u>Liquidambar styraciflua</u>	10	Yes	FAC																	
3. <u>Liriodendron tulipifera</u>	10	Yes	FACU																	
4. <u>Pinus taeda</u>	10	Yes	FAC																	
5. <u>Acer rubrum</u>	10	Yes	FAC																	
6. <u>Ulmus rubra</u>	5	No	FAC																	
7. _____																				
8. _____																				
<u>60</u> = Total Cover 50% of total cover: <u>30</u> 20% of total cover: <u>12</u>				<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:right;">Total % Cover of:</td> <td style="width:50%; text-align:right;">Multiply by:</td> </tr> <tr> <td>OBL species <u>7</u></td> <td>x 1 = <u>7</u></td> </tr> <tr> <td>FACW species <u>46</u></td> <td>x 2 = <u>92</u></td> </tr> <tr> <td>FAC species <u>73</u></td> <td>x 3 = <u>219</u></td> </tr> <tr> <td>FACU species <u>32</u></td> <td>x 4 = <u>128</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>158</u> (A)</td> <td><u>446</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>2.82</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>7</u>	x 1 = <u>7</u>	FACW species <u>46</u>	x 2 = <u>92</u>	FAC species <u>73</u>	x 3 = <u>219</u>	FACU species <u>32</u>	x 4 = <u>128</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>158</u> (A)	<u>446</u> (B)	Prevalence Index = B/A = <u>2.82</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>7</u>	x 1 = <u>7</u>																			
FACW species <u>46</u>	x 2 = <u>92</u>																			
FAC species <u>73</u>	x 3 = <u>219</u>																			
FACU species <u>32</u>	x 4 = <u>128</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>158</u> (A)	<u>446</u> (B)																			
Prevalence Index = B/A = <u>2.82</u>																				
<u>30</u> = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u>																				
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																				
1. <u>Ilex opaca</u>	13	Yes	FAC																	
2. <u>Ligustrum sinense</u>	7	Yes	FAC																	
3. <u>Fraxinus pennsylvanica</u>	6	Yes	FACW																	
4. <u>Ulmus rubra</u>	4	No	FAC																	
5. _____																				
6. _____																				
7. _____																				
8. _____																				
<u>30</u> = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u>																				
<b>Herb Stratum (Plot size: <u>5</u> )</b>																				
1. <u>Arundinaria gigantea</u>	25	Yes	FACW	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																
2. <u>Athyrium asplenoides</u>	7	No	FAC																	
3. <u>Circaea canadensis</u>	7	No	FACU																	
4. <u>Woodwardia areolata</u>	7	No	OBL																	
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
<u>46</u> = Total Cover 50% of total cover: <u>23</u> 20% of total cover: <u>9.2</u>																				
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																				
1. <u>Lonicera japonica</u>	15	Yes	FACU																	
2. <u>Toxicodendron radicans</u>	7	Yes	FAC																	
3. _____																				
4. _____																				
5. _____																				
<u>22</u> = Total Cover 50% of total cover: <u>11</u> 20% of total cover: <u>4.4</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.																				
<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																				
Remarks: (If observed, list morphological adaptations below).																				

**SOIL**

Sampling Point: wsua072f\_w

**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 4/3	100					SL	
7-18	10YR 4/2	96	7.5YR 4/6	4	C	PL/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.)**

- 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: none  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:





**Photo 1**  
Wetland data point wsua072f\_w facing southwest



**Photo 2**  
Wetland data point wsua072f\_w facing southeast

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

Project/Site: Atlantic Coast Pipeline City/County: City of Suffolk Sampling Date: 9/16/2015  
 Applicant/Owner: Dominion State: VA Sampling Point: wsua072\_u  
 Investigator(s): GB, SA Section, Township, Range: No PLSS in this area  
 Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): none Slope (%): 4  
 Subregion (LRR or MLRA): T Lat: 36.64344746 Long: -76.85868343 Datum: WGS 1984  
 Soil Map Unit Name: Goldsboro fine sandy loam, 2 to 5 percent slopes, eroded NWI classification: None

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 data point taken above toe of slope for a saturated to temporarily-flooded PFO wetland located in a shallow swale.	

**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) <b>(LRR U)</b> <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) <b>(LRR T, U)</b>
<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): _____	<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: no hydrology indicators present	

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

Sampling Point: wsua072\_u

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u><i>Pinus taeda</i></u>	<u>35</u>	Yes	FAC	<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>8</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)														
2. <u><i>Liriodendron tulipifera</i></u>	<u>20</u>	Yes	FACU															
3. <u><i>Acer rubrum</i></u>	<u>8</u>	No	FAC															
4. <u><i>Liquidambar styraciflua</i></u>	<u>7</u>	No	FAC															
5. <u><i>Ulmus rubra</i></u>	<u>5</u>	No	FAC															
6. _____				<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:right;">Total % Cover of:</td> <td style="width:50%; text-align:left;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>87</u></td> <td>x 3 = <u>261</u></td> </tr> <tr> <td>FACU species <u>43</u></td> <td>x 4 = <u>172</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>130</u> (A)</td> <td><u>433</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.33</u>	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>87</u>	x 3 = <u>261</u>	FACU species <u>43</u>	x 4 = <u>172</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>130</u> (A)	<u>433</u> (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>87</u>	x 3 = <u>261</u>																	
FACU species <u>43</u>	x 4 = <u>172</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>130</u> (A)	<u>433</u> (B)																	
7. _____																		
8. _____																		
<u>75</u> = Total Cover																		
50% of total cover: <u>37.5</u>		20% of total cover: <u>15</u>																
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. <u><i>Ilex opaca</i></u>	<u>15</u>	Yes	FAC	<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 ≤3.0 <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
2. <u><i>Symplocos tinctoria</i></u>	<u>10</u>	Yes	FAC															
3. <u><i>Acer rubrum</i></u>	<u>5</u>	No	FAC															
4. <u><i>Liriodendron tulipifera</i></u>	<u>5</u>	No	FACU															
5. <u><i>Quercus alba</i></u>	<u>2</u>	No	FACU															
6. _____				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
7. _____																		
8. _____																		
<u>37</u> = Total Cover																		
50% of total cover: <u>18.5</u>		20% of total cover: <u>7.4</u>																
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u><i>Dryopteris marginalis</i></u>	<u>2</u>	Yes	FACU	<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><i>Carex blanda</i></u>	<u>2</u>	Yes	FAC															
3. <u><i>Mitchella repens</i></u>	<u>2</u>	Yes	FACU															
4. _____																		
5. _____																		
6. _____																		
7. _____																		
8. _____																		
9. _____																		
10. _____																		
11. _____																		
12. _____																		
<u>6</u> = Total Cover																		
50% of total cover: <u>3</u>		20% of total cover: <u>1.2</u>																
<b>Woody Vine Stratum (Plot size: <u>30</u> )</b>																		
1. <u><i>Lonicera japonica</i></u>	<u>12</u>	Yes	FACU	<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>														
2. _____																		
3. _____																		
4. _____																		
5. _____																		
<u>12</u> = Total Cover																		
50% of total cover: <u>6</u>		20% of total cover: <u>2.4</u>																
Remarks: (If observed, list morphological adaptations below).																		

**SOIL**

Sampling Point: wsua072\_u

**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 3/2	100					SL	
4-9	10YR 4/3	100					SL	
9-20	10YR 5/4	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.)**

- 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: none  
 Depth (inches): \_\_\_\_\_

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

Remarks:





**Photo 1**  
Upland data point wsua072\_u facing northwest



**Photo 2**  
Upland data point wsua072\_u facing northeast

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

Project/Site: Atlantic Coast Pipeline City/County: City of Suffolk Sampling Date: 9/16/2015  
 Applicant/Owner: Dominion State: VA Sampling Point: wsua070f\_w  
 Investigator(s): GB, SA Section, Township, Range: No PLSS in this area  
 Landform (hillslope, terrace, etc.): draw Local relief (concave, convex, none): concave Slope (%): 3  
 Subregion (LRR or MLRA): T Lat: 36.64510096 Long: -76.85868839 Datum: WGS 1984  
 Soil Map Unit Name: Goldsboro fine sandy loam, 2 to 5 percent slopes, eroded NWI classification: None

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 checked="" type="checkbox"/> No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Wetland data point for a saturated PFO wetland located in intersecting draws.	

**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) <b>(LRR U)</b> <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 checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input checked="" 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 checked="" type="checkbox"/> Sphagnum moss (D8) <b>(LRR T, U)</b>
<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): _____	<b>Wetland Hydrology Present?</b> 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: wsua070f\_w

	Absolute % Cover	Dominant Species?	Indicator Status																	
<b>Tree Stratum</b> (Plot size: <u>30</u> )																				
1. <u>Acer rubrum</u>	12	Yes	FAC	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A)  Total Number of Dominant Species Across All Strata: <u>9</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>77.77777777</u> (A/B)																
2. <u>Fagus grandifolia</u>	10	Yes	FACU																	
3. <u>Liriodendron tulipifera</u>	10	Yes	FACU																	
4. <u>Liquidambar styraciflua</u>	10	Yes	FAC																	
5. <u>Quercus michauxii</u>	10	Yes	FACW																	
6. <u>Nyssa sylvatica</u>	8	No	FAC																	
7. _____																				
8. _____																				
_____ = Total Cover 50% of total cover: <u>30</u> 20% of total cover: <u>12</u>				<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:right;">Total % Cover of:</td> <td style="width:50%; text-align:right;">Multiply by:</td> </tr> <tr> <td>OBL species <u>6</u></td> <td>x 1 = <u>6</u></td> </tr> <tr> <td>FACW species <u>25</u></td> <td>x 2 = <u>50</u></td> </tr> <tr> <td>FAC species <u>62</u></td> <td>x 3 = <u>186</u></td> </tr> <tr> <td>FACU species <u>24</u></td> <td>x 4 = <u>96</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>117</u> (A)</td> <td><u>338</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>2.88</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>6</u>	x 1 = <u>6</u>	FACW species <u>25</u>	x 2 = <u>50</u>	FAC species <u>62</u>	x 3 = <u>186</u>	FACU species <u>24</u>	x 4 = <u>96</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>117</u> (A)	<u>338</u> (B)	Prevalence Index = B/A = <u>2.88</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>6</u>	x 1 = <u>6</u>																			
FACW species <u>25</u>	x 2 = <u>50</u>																			
FAC species <u>62</u>	x 3 = <u>186</u>																			
FACU species <u>24</u>	x 4 = <u>96</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>117</u> (A)	<u>338</u> (B)																			
Prevalence Index = B/A = <u>2.88</u>																				
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																				
1. <u>Ilex opaca</u>	15	Yes	FAC																	
2. <u>Acer rubrum</u>	5	Yes	FAC																	
3. <u>Fagus grandifolia</u>	4	No	FACU																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
_____ = Total Cover 50% of total cover: <u>12</u> 20% of total cover: <u>4.8</u>																				
<b>Herb Stratum</b> (Plot size: <u>5</u> )																				
1. <u>Arundinaria tecta</u>	15	Yes	FACW																	
2. <u>Woodwardia areolata</u>	6	Yes	OBL																	
3. <u>Microstegium vimineum</u>	5	No	FAC																	
4. <u>Athyrium asplenoides</u>	4	No	FAC																	
5. <u>Carex blanda</u>	3	No	FAC																	
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
_____ = Total Cover 50% of total cover: <u>16.5</u> 20% of total cover: <u>6.6</u>																				
<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>																				
Remarks: (If observed, list morphological adaptations below).				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																
<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.																				

**SOIL**

Sampling Point: wsua070f\_w

**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>		
0-9	10YR 3/1	100					SL	
9-18	10YR 4/1	97	10YR 3/6	3	C	PL/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.)**

- 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: none  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:



**Photo 1**  
Wetland data point wsua070f\_w facing southwest



**Photo 2**  
Wetland data point wsua070f\_w facing east

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

Project/Site: Atlantic Coast Pipeline City/County: City of Suffolk Sampling Date: 9/16/2015  
 Applicant/Owner: Dominion State: VA Sampling Point: wsua070\_u  
 Investigator(s): GB, SA Section, Township, Range: No PLSS in this area  
 Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): none Slope (%): 5  
 Subregion (LRR or MLRA): T Lat: 36.64505518 Long: -76.85859701 Datum: WGS 1984  
 Soil Map Unit Name: Goldsboro fine sandy loam, 2 to 5 percent slopes, eroded NWI classification: None

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"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Upland data point taken on slope above a saturated PFO wetland located in a draw.	

### 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) <b>(LRR U)</b> <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) <b>(LRR T, U)</b>
<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): _____	<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: no hydrology indicators present	

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

Sampling Point: wsua070\_u

	Absolute % Cover	Dominant Species?	Indicator Status															
<b>Tree Stratum</b> (Plot size: <u>30</u> )																		
1. <u>Pinus taeda</u>	30	Yes	FAC	<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>Liriodendron tulipifera</u>	20	Yes	FACU															
3. <u>Quercus alba</u>	10	No	FACU															
4. <u>Acer rubrum</u>	10	No	FAC															
5. <u>Liquidambar styraciflua</u>	5	No	FAC															
6. _____																		
7. _____																		
8. _____																		
_____ = Total Cover 50% of total cover: <u>37.5</u> 20% of total cover: <u>15</u>				<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:right">Total % Cover of:</td> <td style="width:50%; text-align:right">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>4</u></td> <td>x 2 = <u>8</u></td> </tr> <tr> <td>FAC species <u>69</u></td> <td>x 3 = <u>207</u></td> </tr> <tr> <td>FACU species <u>46</u></td> <td>x 4 = <u>184</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>119</u> (A)</td> <td><u>399</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.35</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>4</u>	x 2 = <u>8</u>	FAC species <u>69</u>	x 3 = <u>207</u>	FACU species <u>46</u>	x 4 = <u>184</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>119</u> (A)	<u>399</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>4</u>	x 2 = <u>8</u>																	
FAC species <u>69</u>	x 3 = <u>207</u>																	
FACU species <u>46</u>	x 4 = <u>184</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>119</u> (A)	<u>399</u> (B)																	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																		
1. <u>Fagus grandifolia</u>	15	Yes	FACU		<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>Ilex opaca</u>	10	Yes	FAC															
3. <u>Acer rubrum</u>	10	Yes	FAC															
4. <u>Liquidambar styraciflua</u>	3	No	FAC															
5. _____																		
6. _____																		
7. _____																		
8. _____																		
_____ = Total Cover 50% of total cover: <u>19</u> 20% of total cover: <u>7.6</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.														
<b>Herb Stratum</b> (Plot size: <u>5</u> )																		
1. <u>Arundinaria tecta</u>	4	Yes	FACW		<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>													
2. <u>Carex blanda</u>	1	No	FAC															
3. <u>Mitchella repens</u>	1	No	FACU															
4. _____																		
5. _____																		
6. _____																		
7. _____																		
8. _____																		
9. _____																		
10. _____																		
11. _____																		
12. _____																		
_____ = Total Cover 50% of total cover: <u>3</u> 20% of total cover: <u>1.2</u>																		
<b>Woody Vine Stratum</b> (Plot size: <u>30</u> )																		
1. _____				_____ = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>														
2. _____																		
3. _____																		
4. _____																		
5. _____																		
6. _____																		

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

**SOIL**

Sampling Point: wsua070\_u

**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 3/2	100					SL	
8-18	10YR 6/3	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.)**

- 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: none  
 Depth (inches): \_\_\_\_\_

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

Remarks:





**Photo 1**  
Upland data point wsua070\_u facing southeast



**Photo 2**  
Upland data point wsua070\_u facing southwest

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

Project/Site: Atlantic Coast Pipeline City/County: City of Suffolk Sampling Date: 9/16/2015  
 Applicant/Owner: Dominion State: VA Sampling Point: wsua071f\_w  
 Investigator(s): GB, SA Section, Township, Range: No PLSS in this area  
 Landform (hillslope, terrace, etc.): broad draw Local relief (concave, convex, none): concave Slope (%): 2  
 Subregion (LRR or MLRA): T Lat: 36.64592782 Long: -76.8588934 Datum: WGS 1984  
 Soil Map Unit Name: Goldsboro fine sandy loam, 2 to 5 percent slopes, eroded NWI classification: PFO1E

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 checked="" type="checkbox"/> No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Wetland data point for a saturated to seasonally-flooded PFO wetland in a broad, low gradient draw along stream; stream and downline extent of this feature were not collected because they are in a no access tract.	

**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) <b>(LRR U)</b> <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" 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 checked="" 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 checked="" type="checkbox"/> Drainage Patterns (B10) <input checked="" type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input checked="" 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) <b>(LRR T, U)</b>
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>13</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>16</u> Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	<b>Wetland Hydrology Present?</b> 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: wsua071f\_w

	Absolute % Cover	Dominant Species?	Indicator Status																	
<b>Tree Stratum</b> (Plot size: <u>30</u> )																				
1. <u>Nyssa biflora</u>	15	Yes	OBL	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>9</u> (A)  Total Number of Dominant Species Across All Strata: <u>9</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																
2. <u>Fraxinus pennsylvanica</u>	15	Yes	FACW																	
3. <u>Acer rubrum</u>	10	No	FAC																	
4. <u>Taxodium distichum</u>	10	No	OBL																	
5. <u>Liquidambar styraciflua</u>	5	No	FAC																	
6. <u>Quercus lyrata</u>	5	No	OBL																	
7. _____																				
8. _____																				
<u>60</u> = Total Cover 50% of total cover: <u>30</u> 20% of total cover: <u>12</u>				<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:right;">Total % Cover of:</td> <td style="width:50%; text-align:right;">Multiply by:</td> </tr> <tr> <td>OBL species <u>61</u></td> <td>x 1 = <u>61</u></td> </tr> <tr> <td>FACW species <u>19</u></td> <td>x 2 = <u>38</u></td> </tr> <tr> <td>FAC species <u>36</u></td> <td>x 3 = <u>108</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>116</u> (A)</td> <td><u>207</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>1.78</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>61</u>	x 1 = <u>61</u>	FACW species <u>19</u>	x 2 = <u>38</u>	FAC species <u>36</u>	x 3 = <u>108</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>116</u> (A)	<u>207</u> (B)	Prevalence Index = B/A = <u>1.78</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>61</u>	x 1 = <u>61</u>																			
FACW species <u>19</u>	x 2 = <u>38</u>																			
FAC species <u>36</u>	x 3 = <u>108</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>116</u> (A)	<u>207</u> (B)																			
Prevalence Index = B/A = <u>1.78</u>																				
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																				
1. <u>Taxodium distichum</u>	6	Yes	OBL																	
2. <u>Fraxinus pennsylvanica</u>	4	Yes	FACW																	
3. <u>Acer rubrum</u>	4	Yes	FAC																	
4. <u>Carpinus caroliniana</u>	3	No	FAC																	
5. <u>Liquidambar styraciflua</u>	3	No	FAC																	
6. _____																				
7. _____																				
8. _____																				
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>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 checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																
<b>Herb Stratum</b> (Plot size: <u>5</u> )																				
1. <u>Saururus cernuus</u>	10	Yes	OBL																	
2. <u>Leersia oryzoides</u>	6	Yes	OBL																	
3. <u>Panicum hydropiperoides</u>	6	Yes	OBL																	
4. <u>Murdannia spirata</u>	5	No	FAC																	
5. <u>Bacopa caroliniana</u>	3	No	OBL																	
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
<u>30</u> = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</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.																
<b>Woody Vine Stratum</b> (Plot size: <u>30</u> )																				
1. <u>Campsis radicans</u>	6	Yes	FAC																	
2. _____																				
3. _____																				
4. _____																				
5. _____																				
<u>6</u> = Total Cover 50% of total cover: <u>3</u> 20% of total cover: <u>1.2</u>					<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>															
Remarks: (If observed, list morphological adaptations below).																				

**SOIL**

Sampling Point: wsua071f\_w

**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	10YR 3/1	100					L	
6-20	10YR 4/1	97	10YR 5/5	3	C	PL	CL	

<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: none  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:





**Photo 1**  
Wetland data point wsua071f\_w facing east



**Photo 2**  
Wetland data point wsua071f\_w facing north



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

Project/Site: Atlantic Coast Pipeline City/County: City of Suffolk Sampling Date: 9/16/2015  
 Applicant/Owner: Dominion State: VA Sampling Point: wsua071\_u  
 Investigator(s): GB, SA Section, Township, Range: No PLSS in this area  
 Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): none Slope (%): 6  
 Subregion (LRR or MLRA): T Lat: 36.64583973 Long: -76.85890611 Datum: WGS 1984  
 Soil Map Unit Name: Goldsboro fine sandy loam, 2 to 5 percent slopes, eroded NWI classification: None

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 data point taken above toe of slope for a saturated to seasonally-flooded PFO wetland located in a broad low gradient draw.	

**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) <b>(LRR U)</b> <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) <b>(LRR T, U)</b>
<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: no hydrology indicators present	



**SOIL**

Sampling Point: wsua071\_u

**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 4/3	100					SL	
5-9	10YR 5/4	100					SL	
9-20	10YR 6/3	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.)**

- 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: none  
 Depth (inches): \_\_\_\_\_

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

Remarks:



**Photo 1**  
Upland data point wsua071\_u facing southeast



**Photo 2**  
Upland data point wsua071\_u facing southwest

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

Project/Site: ACP City/County: Suffolk Sampling Date: 3/29/16  
 Applicant/Owner: Dominion State: VA Sampling Point: W6589-20  
 Investigator(s): S. Bryan, L. Roper Section, Township, Range: none  
 Landform (hillslope, terrace, etc.): drainage Local relief (concave, convex, none): concave Slope (%): 0-3  
 Subregion (LRR or MLRA): LRR T Lat: 36.64945 Long: -76.85946 Datum: WGS84  
 Soil Map Unit Name: Nansemond loamy fine sand NWI classification: PFD  
 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 checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:  <p align="center"><u>NEWAM: Headwater Forest</u></p>	

**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 checked="" 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 checked="" 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)
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<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>10</u> Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>surface</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
portions of wetland inundated



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

Sampling Point: W440037F-10

Tree Stratum (Plot size: <u>30ft x 30ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Ilex opaca</u>	<u>15</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>7</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>86%</u> (A/B)
2. <u>Taxodium distichum</u>	<u>10</u>	<u>Y</u>	<u>OBL</u>	
3. <u>Carpinus caroliniana</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	
4. <u>Liquidambar styraciflua</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	
5. _____				<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 = _____
6. _____				
7. _____				
8. _____				
50% of total cover: <u>22.5</u> 20% of total cover: <u>9</u> <u>45</u> = Total Cover				<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>30ft x 30ft</u>)</b>				
1. <u>Carpinus caroliniana</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	
2. _____				
3. _____				<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.
4. _____				
5. _____				
6. _____				
50% of total cover: <u>5</u> 20% of total cover: <u>2</u> <u>10</u> = Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<b>Herb Stratum (Plot size: <u>30ft x 30ft</u>)</b>				
1. <u>none</u>				
2. _____				
3. _____				_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____
4. _____				
5. _____				
6. _____				
<b>Woody Vine Stratum (Plot size: <u>30ft x 30ft</u>)</b>				_____ = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>
1. <u>Lonicera japonica</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Vitis rotundifolia</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	
3. _____				
4. _____				_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____
5. _____				
6. _____				
7. _____				
Remarks: (if observed, list morphological adaptations below).				

**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	10YR 4/3	100					L	
6-10	10YR 4/2	90	7.5YR 5/6	10	C	M	SiL	
10-20	10YR 5/2	80	7.5YR 5/6	20	C	M	SiLL	

<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:



*Environmental Field Surveys*  
*Wetland Photo Page*



**Wetland data point wsuo037f\_w facing south.**



**Wetland data point wsuo037f\_w facing south.**



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

Project/Site: ACP City/County: suffolk Sampling Date: 3/29/16  
 Applicant/Owner: Dominion State: VA Sampling Point: WSU037-u  
 Investigator(s): S. Bryan, L. Roper Section, Township, Range: none  
 Landform (hillslope, terrace, etc.): drainage Local relief (concave, convex, none): concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): LRR T Lat: 36.64939 Long: -76.85946 Datum: WGS84  
 Soil Map Unit Name: Nansemond loamy fine sand 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 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"/>	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 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 type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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<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;20</u> Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u>	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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

Sampling Point: W960037-2

Tree Stratum (Plot size: <u>30ft x 30ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Pinus taeda</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</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>50</u> (A/B)
2. <u>Liriodendron tulipifera</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
<u>25</u> = Total Cover				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species <u>35</u> x 3 = <u>105</u> FACU species <u>30</u> x 4 = <u>120</u> UPL species _____ x 5 = _____ Column Totals: <u>65</u> (A) <u>225</u> (B)  Prevalence Index = B/A = <u>3.46</u>
50% of total cover: <u>12.5</u> 20% of total cover: <u>5</u>				
<b>Sapling/Shrub Stratum (Plot size: <u>30ft x 30ft</u>)</b>				
1. <u>Carpinus caroliniana</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 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>Liriodendron tulipifera</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
<u>20</u> = Total Cover				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
50% of total cover: <u>10</u> 20% of total cover: <u>4</u>				
<b>Herb Stratum (Plot size: <u>30ft x 30ft</u>)</b>				
1. <u>none</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. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
_____ = Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>
50% of total cover: _____ 20% of total cover: _____				
<b>Woody Vine Stratum (Plot size: <u>30ft x 30ft</u>)</b>				
1. <u>Vitis rotundifolia</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____
2. <u>Lonicera japonica</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
<u>20</u> = Total Cover				_____ = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</u>
50% of total cover: <u>10</u> 20% of total cover: <u>4</u>				
Remarks: (If observed, list morphological adaptations below).				



**SOIL**

Sampling Point: W340037-L

**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>		
0-2	10YR 3/3	100					L	
2-14	2.5Y 6/6	100					SL	
14-20	2.5Y 6/8	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.)**

- 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:

*Environmental Field Surveys*  
*Wetland Photo Page*



**Upland data point wsuo037\_u facing south.**



**Upland data point wsuo037\_u facing west.**



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

Project/Site: ACP City/County: Suffolk Sampling Date: 10/7/15  
 Applicant/Owner: Dominion State: VA Sampling Point: WSW0013F-W  
 Investigator(s): J. Benton Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0-2  
 Subregion (LRR or MLRA): LRR T Lat: 36.65902 Long: -76.85178 Datum: WGS-84  
 Soil Map Unit Name: Levy silty clay loam NWI classification: PFG  
 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"/>	Is the Sampled Area within a Wetland?	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 checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: <u>Bottomland hardwood forest</u>			

**HYDROLOGY**

<p><b>Wetland Hydrology Indicators:</b></p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <p><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 checked="" 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 checked="" type="checkbox"/> Other (Explain in Remarks)  <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)  <input checked="" type="checkbox"/> Water-Stained Leaves (B9)</p>	<p><u>Secondary Indicators (minimum of two required)</u></p> <p><input type="checkbox"/> Surface Soil Cracks (B6)  <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)  <input checked="" type="checkbox"/> Drainage Patterns (B10)  <input type="checkbox"/> Moss Trim Lines (B16)  <input type="checkbox"/> Dry-Season Water Table (C2)  <input checked="" 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)</p>
<p><b>Field Observations:</b></p> <p>Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u>                  Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>4</u>                  Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>Surface</u></p>	<p>Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <u>buttressed trees</u>	

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

Sampling Point: WSU0013F-w

Tree Stratum (Plot size: <u>30 x 30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Acer rubrum</u>	<u>35</u>	<u>Y</u>	<u>FAC</u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>9</u> (A)  Total Number of Dominant Species Across All Strata: <u>9</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. <u>Nyssa biflora</u>	<u>25</u>	<u>Y</u>	<u>OBL</u>	
3. <u>Ilex opaca</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>75</u> = Total Cover 50% of total cover: <u>37.5</u> 20% of total cover: <u>15</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 (Plot size: <u>30 x 30</u>)</b>				
1. <u>Ligustrum sinense</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Ilex opaca</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Fraxinus pennsylvanica</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>20</u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>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>Herb Stratum (Plot size: <u>30 x 30</u>)</b>				
1. <u>Microstegium vimineum</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Boehmeria cylindrica</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>40</u> = Total Cover 50% of total cover: <u>20</u> 20% of total cover: <u>8</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.
<b>Woody Vine Stratum (Plot size: <u>30 x 30</u>)</b>				
1. <u>Lonicera japonica</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>5</u> = Total Cover 50% of total cover: <u>2.5</u> 20% of total cover: <u>1</u>				
Remarks: (If observed, list morphological adaptations below).				





*Environmental Field Surveys*  
*Wetland Photo Page*



**Wetland data point wsuo013f\_w facing east.**



**Wetland data point wsuo013f\_w facing west.**

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

Project/Site: ACP City/County: Suffolk Sampling Date: 10/7/15  
 Applicant/Owner: Dominion State: VA Sampling Point: WSUD013-v1  
 Investigator(s): J. Benton Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Concave Slope (%): 0-2  
 Subregion (LRR or MLRA): LRRT Lat: 36.65894 Long: -76.85169 Datum: WGS-84  
 Soil Map Unit Name: Goldsboro fine sandy loam, 2 to 5% slopes 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 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)	Secondary Indicators (minimum of two required)
<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>N/A</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>220</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>18</u> (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:	



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

Sampling Point: WS40 D13-U1

Tree Stratum (Plot size: <u>30 x 30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Liriodendron tulipifera</u>	<u>35</u>	<u>Y</u>	<u>FACU</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A)
2. <u>Liquidambar styraciflua</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	Total Number of Dominant Species Across All Strata: <u>8</u> (B)
3. <u>Quercus alba</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)
4. _____	_____	_____	_____	<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 = _____
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>70</u> = Total Cover 50% of total cover: <u>35</u> 20% of total cover: <u>14</u>				
<b>Sapling/Shrub Stratum (Plot size: <u>30 x 30</u>)</b>				
1. <u>Ilex opaca</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Carpinus caroliniana</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>35</u> = Total Cover 50% of total cover: <u>17.5</u> 20% of total cover: <u>7</u>				
<b>Herb Stratum (Plot size: <u>30 x 30</u>)</b>				
1. <u>Osmundastrum cinnamomeum</u>	<u>5</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. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>5</u> = Total Cover 50% of total cover: <u>2.5</u> 20% of total cover: <u>1</u>				
<b>Woody Vine Stratum (Plot size: <u>30 x 30</u>)</b>				
1. <u>Vitis rotundifolia</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
2. <u>Lonicera japonica</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: WSU0013\_v1

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 3/2	100					SL	
6-20	10YR 5/6	80	7.5YR 5/8	20	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"/> Histic (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 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:



*Environmental Field Surveys*  
*Wetland Photo Page*



**Upland data point wsuo013\_u1 facing east.**



**Upland data point wsuo013\_u1 facing west.**



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

Project/Site: ACP City/County: Suffolk Sampling Date: 10/7/15  
 Applicant/Owner: Dominion State: VA Sampling Point: WSU0013-v2  
 Investigator(s): J. Benton Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 2-4  
 Subregion (LRR or MLRA): LRR T Lat: 36.65954 Long: -76.85161 Datum: WGS-84  
 Soil Map Unit Name: Nansemond loamy fine sand, 6-15% slopes 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 <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: <p align="center"><u>upland inclusion</u></p>	

**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) (LRR U) ___ 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) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>&gt;20</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>&gt;20</u> (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:	

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

Sampling Point: WS40 D13-v2

Tree Stratum (Plot size: <u>30 X 30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Liriodendron tulipifera</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)
2. <u>Pinus taeda</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>	Total Number of Dominant Species Across All Strata: <u>8</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>63</u> (A/B)
4. _____	_____	_____	_____	<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 = _____
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
50% of total cover: <u>40</u> 20% of total cover: <u>16</u> <u>80</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>30 X 30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Carpinus caroliniana</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
2. <u>Liquidambar styraciflua</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
3. <u>Cornus florida</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	<input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup>
4. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
50% of total cover: <u>10</u> 20% of total cover: <u>4</u> <u>20</u> = Total Cover				
Herb Stratum (Plot size: <u>30 X 30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Four Vegetation Strata:
1. <u>Polystichum acrostichoides</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
2. <u>Osmundastrum cinnamomeum</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>	<b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
3. _____	_____	_____	_____	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
4. _____	_____	_____	_____	<b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
50% of total cover: <u>7.5</u> 20% of total cover: <u>3</u> <u>15</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30 X 30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. <u>Lonicera japonica</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
50% of total cover: <u>2.5</u> 20% of total cover: <u>1</u> <u>5</u> = Total Cover				
Remarks: (If observed, list morphological adaptations below).				

**SOIL**

Sampling Point: WSu0013-v2

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	2.5Y 5/6	100					SL	
8-14	2.5Y 5/6	90	7.5YR 5/8	10	C	M	SL	
14-20	7.5YR 5/8	100					CL	

<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) (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)	<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)					

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

Remarks:



*Environmental Field Surveys*  
*Wetland Photo Page*



**Upland data point wsuo013\_u2 facing northeast.**



**Upland data point wsuo013\_u2 facing southwest.**



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

Project/Site: ACP City/County: Suffolk State: VA Sampling Date: 9/22/15  
 Applicant/Owner: Dominion Sampling Point: Wsu0012F-w  
 Investigator(s): LKR, CSM Section, Township, Range: none  
 Landform (hillslope, terrace, etc.): Drainage Local relief (concave, convex, none): Concave Slope (%): 10  
 Subregion (LRR or MLRA): LRR T Lat: 36.66487°N Long: 76.85137°W Datum: WGS84  
 Soil Map Unit Name: Nansemona loamy fine sand NWI classification: PFO  
 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 \_\_\_ No X  
 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 <u>X</u> No ___ Wetland Hydrology Present? Yes <u>X</u> No ___	Is the Sampled Area within a Wetland? Yes <u>X</u> No ___
Remarks: <span style="float: right; font-weight: bold;">NCWAM: Headwater Forest</span>  <span style="font-size: 1.2em;">Abnormally dry conditions (based on 9/22 drought monitor)</span>	

**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 checked="" 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 checked="" 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 checked="" 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 (D6) (LRR T, U)
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<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)																					
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)																					
<b>Field Observations:</b> Surface Water Present? Yes ___ No <u>X</u> Depth (inches): <u>NA</u> Water Table Present? Yes ___ No <u>X</u> Depth (inches): <u>220</u> Saturation Present? Yes ___ No <u>X</u> Depth (inches): <u>220</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No ___																				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:																					
Remarks:																					



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

Sampling Point: NSW012EW

Tree Stratum (Plot size: <u>30x30</u> )				Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Liriodendron tulipifera</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>		
2.	<u>Fraxinus pennsylvanica</u>	<u>5</u>	<u>N</u>	<u>FACW</u>		
3.	<u>Ligustrum sinense</u>	<u>15</u>	<u>N</u>	<u>FAC</u>		
4.						
5.						
6.						
7.						
8.						
		50% of total cover: <u>20</u>		40 = Total Cover		8
		20% of total cover: <u>8</u>				
Sapling/Shrub Stratum (Plot size: <u>30x30</u> )				Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Ligustrum sinense</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>		
2.	<u>Ilex opaca</u>	<u>10</u>	<u>N</u>	<u>FAC</u>		
3.						
4.						
5.						
6.						
7.						
8.						
		50% of total cover: <u>15</u>		30 = Total Cover		10
		20% of total cover: <u>10</u>				
Herb Stratum (Plot size: <u>30x30</u> )				Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Woodwardia areolata</u>	<u>10</u>	<u>Y</u>	<u>OBL</u>		
2.	<u>Athyrium asplenoides</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>		
3.	<u>Ligustrum sinense</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>		
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
		50% of total cover: <u>15</u>		30 = Total Cover		10
		20% of total cover: <u>10</u>				
Woody Vine Stratum (Plot size: <u>30x30</u> )				Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Vitis rotundifolia</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>		
2.						
3.						
4.						
5.						
		50% of total cover: <u>5</u>		10 = Total Cover		2
		20% of total cover: <u>2</u>				

  

<b>Dominance Test worksheet:</b>	
Number of Dominant Species That Are OBL, FACW, or FAC:	<u>5</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>83%</u> (A/B)
<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>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)
<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.	
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____	

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

SOIL

Sampling Point: WSU012F-10

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	10YR 3/2	98	10YR 4/4	2	C	M	CL	
6-10	10YR 2/1	100					SCL	
10-20	10YR 5/2	100					S	

<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:



*Environmental Field Surveys*  
*Wetland Photo Page*



**Wetland data point wsuo012f\_w facing west.**



**Wetland data point wsuo012f\_w facing south.**

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

Project/Site: ACP City/County: Suffolk Sampling Date: 9/22/15  
 Applicant/Owner: Dominion State: VA Sampling Point: WSU012-a  
 Investigator(s): LKR, CSM Section, Township, Range: Concave  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 10  
 Subregion (LRR or MLRA): LRT Lat: 36.66499°N Long: 76.85122°W Datum: NAD83  
 Soil Map Unit Name: Nansemond loamy fine sand 11-15% slopes NWI classification: None  
 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:  <p align="center"><u>Abnormally dry conditions (based on 9/22 drought monitor)</u></p>	

**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)
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<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; 20</u> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>&gt; 25</u> (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:																																



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

Sampling Point: WSU0012-4

Tree Stratum (Plot size: <u>30 X 30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Liquidambar styraciflua</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u>	(A)
2. <u>Liriodendron tulipifera</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	Total Number of Dominant Species Across All Strata: <u>5</u>	(B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60</u>	(A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:	
5. _____	_____	_____	_____	Total % Cover of: _____	Multiply by: _____
6. _____	_____	_____	_____	OBL species _____	x 1 = _____
7. _____	_____	_____	_____	FACW species _____	x 2 = _____
8. _____	_____	_____	_____	FAC species _____	x 3 = _____
50% of total cover: <u>17.5</u> 20% of total cover: <u>7</u>				FACU species _____	x 4 = _____
Total Cover: <u>35</u>				UPL species _____	x 5 = _____
Sapling/Shrub Stratum (Plot size: <u>30 X 30</u> )				Column Totals: _____	(A) _____ (B)
1. <u>Liquidambar styraciflua</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	Prevalence Index = B/A = _____	
2. <u>Liriodendron tulipifera</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators:	
3. <u>Ilex opaca</u>	<u>5</u>	<u>N</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)	
4. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
5. _____	_____	_____	_____	Definitions of Four Vegetation Strata:	
6. _____	_____	_____	_____	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
7. _____	_____	_____	_____	Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
8. _____	_____	_____	_____	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
9. _____	_____	_____	_____	Woody vine – All woody vines greater than 3.28 ft in height.	
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
50% of total cover: <u>10</u> 20% of total cover: <u>4</u>					
Total Cover: <u>20</u>					
Herb Stratum (Plot size: <u>30 X 30</u> )					
1. <u>Arundinaria gigantea</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
2. <u>Onoclea sensibilis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>		
3. <u>Athyrium asplenoides</u>	<u>10</u>	<u>N</u>	<u>FAC</u>		
4. <u>Osmundia cinnamomea</u>	<u>5</u>	<u>N</u>	<u>FACW</u>		
5. <u>Ligustrum sinense</u>	<u>10</u>	<u>N</u>	<u>FAC</u>		
6. <u>Microstegium vimineum</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
50% of total cover: <u>35</u> 20% of total cover: <u>14</u>					
Total Cover: <u>70</u>					
Woody Vine Stratum (Plot size: <u>30 X 30</u> )					
1. <u>Vitis rotundifolia</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
50% of total cover: <u>5</u> 20% of total cover: <u>2</u>					
Total Cover: <u>10</u>					
Remarks: (If observed, list morphological adaptations below).					

SOIL

Sampling Point: WSND12-1

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	10YR 4/3	100					SL	
6-12	10YR 4/3	95	7.5YR 4/6	5	C	M	LS	
12-20	10YR 4/1	95	10YR 4/6	5	C	M	LS	

<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:



*Environmental Field Surveys*  
*Wetland Photo Page*



**Upland data point wsuo012\_u facing north.**



**Upland data point wsuo012\_u facing east.**

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

Project Site: ACP City/County: Suffolk State: VA Sampling Date: 12/17/15  
 Applicant/Owner: Dominion Section, Township, Range: NA Sampling Point: Wsup030e.w  
 Investigator(s): ESI-J. Harbour, K. Murphy Local relief (concave, convex, none): concave Slope (%) 0-2  
 Landform (hillslope, terrace, etc.): drainage Subregion (LRR or MLRA): LRR T Lat: 36.66753 Long: -76.84496 Datum: NAD 84  
 Soil Map Unit Name: Goldsboro fine sandy loam, 2-5% slopes, eroded NWI classification: PEM  
 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 checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required, check all that apply) <input checked="" 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 checked="" 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 checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>4"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>SURFACE</u> (includes capillary fringe)	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: wsup030e-w

Tree Stratum (Plot size: <u>30ft X 30ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>None present</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. _____				<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 = _____
5. _____				
6. _____				
7. _____				
8. _____				
50% of total cover: _____ 20% of total cover: _____ <u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>30ft X 30ft</u> )				
1. <u>None present</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
50% of total cover: _____ 20% of total cover: _____ <u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>30ft X 30ft</u> )				
1. <u>Juncus effusus</u>	<u>40</u>	<u>Y</u>	<u>OBL</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>  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.
2. <u>Oenoclea sensibilis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
3. <u>Solidago gigantea</u>	<u>15</u>	<u>N</u>	<u>FACW</u>	
4. <u>Alopecurus carolinianus</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
5. <u>Trifolium pratense</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
6. <u>Andropogon virginicus</u>	<u>2</u>	<u>N</u>	<u>FAC</u>	
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
50% of total cover: <u>41</u> 20% of total cover: <u>16.4</u> <u>82</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30ft X 30ft</u> )				
1. <u>None present</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____				
3. _____				
4. _____				
5. _____				
50% of total cover: _____ 20% of total cover: _____ <u>0</u> = Total Cover				
Remarks: (If observed, list morphological adaptations below).				

**SOIL**

Sampling Point: wsup030e.w

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>		
0-20	10yR3/1	90	10yR3/6	2	C	PL	SL	
			10yR3/6	8	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>:

- |  |   |   |
|--|---|---|
| <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> | <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 checked="" 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> |
|--|---|---|

<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:



*Environmental Field Surveys*  
*Wetland Photo Page*



**Wetland data point wsup030e\_w facing northeast.**



**Wetland data point wsup030e\_w facing southwest.**

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

Project/Site: ACP City/County: Suffolk State: VA Sampling Date: 12/17/15  
 Applicant/Owner: Dominion Section, Township, Range: NA Sampling Point: WSupD30-u  
 Investigator(s): ESS-J. Harbour, K. Murphy Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 2.4  
 Subregion (LRR or MLRA): LRRT Lat: 36.66758 Long: -76.845034 Datum: NAD83  
 Soil Map Unit Name: Goldsworo Fine sandy loam, 2-5%, eroded 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 _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? 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> <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 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 _____ No <input checked="" type="checkbox"/> Depth (inches): <u>NA</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>720</u> Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>720</u> (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: _____ _____ _____	
Remarks: <u>Data point taken at field edge</u> _____ _____	



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

Sampling Point: wsup030-u

Tree Stratum (Plot size: <u>30ft X 30ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>None present</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
4. _____				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species <u>75</u> x 4 = <u>300</u> UPL species _____ x 5 = _____ Column Totals: <u>75</u> (A) <u>300</u> (B) Prevalence Index = B/A = <u>4.0</u>
5. _____				
6. _____				
7. _____				
8. _____				
50% of total cover: _____ 20% of total cover: _____ <u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>30ft X 30ft</u> )				
1. <u>None present</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
50% of total cover: _____ 20% of total cover: _____ <u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>30ft X 30ft</u> )				
1. <u>Trifolium pratense</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
2. <u>Festuca rubra</u>	<u>60</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Allium canadense</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
50% of total cover: <u>75</u> = Total Cover 20% of total cover: <u>15</u>				
Woody Vine Stratum (Plot size: <u>30ft X 30ft</u> )				
1. <u>None present</u>				
2. _____				
3. _____				
4. _____				
5. _____				
50% of total cover: _____ 20% of total cover: _____ <u>0</u> = Total Cover				
Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>				
Remarks: (If observed, list morphological adaptations below).  <u>Field edge</u>				

**SOIL**

Sampling Point: wsup030-u

**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>		
0-20	10yR 2/2	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.)		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)		
<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:

*Environmental Field Surveys*  
*Wetland Photo Page*



**Upland data point wsup030\_u facing north.**



**Upland data point wsup030\_u facing northwest.**

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

Project/Site: ACP City/County: Suffolk Sampling Date: 09/10/14  
 Applicant/Owner: DOMINION State: VA Sampling Point: WSUP014e-w  
 Investigator(s): R. TURNBULL S. JOSEFA Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Drainage Local relief (concave, convex, none): CONCAVE Slope (%): 1-5  
 Subregion (LRR or MLRA): LRRT Lat: 36.66775 Long: -76.83461 Datum: NAD83  
 Soil Map Unit Name: Rains fine sandy loam NWI classification: PEM

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 checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: <u>Abnormally Dry conditions (Based on Sept. 15 Drought Monitor)</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 checked="" 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 checked="" 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>N/A</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u> Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</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: wsup014e-w

Tree Stratum (Plot size: <u>30x30ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>none</u>				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
0 = Total Cover				
50% of total cover: _____				20% of total cover: _____
Sapling/Shrub Stratum (Plot size: <u>30x30ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>none</u>				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
0 = Total Cover				
50% of total cover: _____				20% of total cover: _____
Herb Stratum (Plot size: <u>30x30ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Panicum sagittata</u>	<u>90</u>	<u>Yes</u>	<u>OBL</u>	
2. <u>Dichanthelium scoparium</u>	<u>20</u>	<u>No</u>	<u>FACW</u>	
3. <u>Anundinaria gigantea</u>	<u>10</u>	<u>No</u>	<u>FACW</u>	
4. <u>Rubus argutus</u>	<u>5</u>	<u>No</u>	<u>FAC</u>	
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
125 = Total Cover				
50% of total cover: <u>62.5</u>				20% of total cover: <u>25</u>
Woody Vine Stratum (Plot size: <u>30x30ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>none</u>				
2.				
3.				
4.				
5.				
0 = 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: 1 (B)

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

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**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.

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**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.

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**Hydrophytic Vegetation Present?** Yes  No

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

SOIL

Sampling Point: wsup014e-w

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>		
0-3	2.5Y 4/2	100					CL	
3-20	2.5Y 4/2	90	10YR 7/6	5	C	PL	CL	

<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)<br><input type="checkbox"/> Histic Epipedon (A2)<br><input type="checkbox"/> Black Histic (A3)<br><input type="checkbox"/> Hydrogen Sulfide (A4)<br><input type="checkbox"/> Stratified Layers (A5)<br><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)<br><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)<br><input type="checkbox"/> Muck Presence (A8) (LRR U)<br><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)<br><input type="checkbox"/> Depleted Below Dark Surface (A11)<br><input type="checkbox"/> Thick Dark Surface (A12)<br><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)<br><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)<br><input type="checkbox"/> Sandy Gleyed Matrix (S4)<br><input type="checkbox"/> Sandy Redox (S5)<br><input type="checkbox"/> Stripped Matrix (S6)<br><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)<br><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)<br><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)<br><input type="checkbox"/> Loamy Gleyed Matrix (F2)<br><input checked="" type="checkbox"/> Depleted Matrix (F3)<br><input type="checkbox"/> Redox Dark Surface (F6)<br><input type="checkbox"/> Depleted Dark Surface (F7)<br><input type="checkbox"/> Redox Depressions (F8)<br><input type="checkbox"/> Marl (F10) (LRR U)<br><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)<br><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)<br><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)<br><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)<br><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)<br><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)<br><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O)<br><input type="checkbox"/> 2 cm Muck (A10) (LRR S)<br><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)<br><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)<br><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)<br><input type="checkbox"/> Red Parent Material (TF2)<br><input type="checkbox"/> Very Shallow Dark Surface (TF12)<br><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 X No \_\_\_\_\_

Remarks:



*Environmental Field Surveys*  
*Wetland Photo Page*



**Wetland data point wsup014e\_w facing northeast.**



**Wetland data point wsup014e\_w facing southeast.**



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

Project/Site: ACP City/County: Suffolk Sampling Date: 09/15/11  
 Applicant/Owner: DOMINION State: VA Sampling Point: WSup014f.w  
 Investigator(s): R-TURNBULL, G. JOSEFD Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Drainage Local relief (concave, convex, none): concave Slope (%): 0-2  
 Subregion (LRR or MLRA): LRRT Lat: 36.66796 Long: -76.83453 Datum: WGS84  
 Soil Map Unit Name: Rains fine sandy loam NWI classification: PFO

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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: <p align="center"><i>Abnormally Dry conditions (Based on Sept. 15 Drought Monitor)</i></p>	

**HYDROLOGY**

<p><b>Wetland Hydrology Indicators:</b></p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></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 checked="" type="checkbox"/> Water Marks (B1)</td> <td><input checked="" 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 checked="" type="checkbox"/> Water Marks (B1)	<input checked="" 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> <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 checked="" 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 checked="" 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 checked="" type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input checked="" 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)																															
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<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)																															
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<p><b>Field Observations:</b></p> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>&gt;20</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>&gt;20</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____																															
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:																																
Remarks:																																



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

Sampling Point: wsup014f-w

Tree Stratum (Plot size: <u>30x30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Acer rubrum</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)
2. <u>Carpinus caroliniana</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	Total Number of Dominant Species Across All Strata: <u>5</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80%</u> (A/B)
4. _____	_____	_____	_____	<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 = _____
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
50% of total cover: <u>20</u> <u>40</u> = Total Cover 20% of total cover: <u>8</u>				
<b>Sapling/Shrub Stratum (Plot size: <u>20x30</u>)</b>				
1. <u>Carpinus caroliniana</u>	<u>50</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Nyssa sylvatica</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
50% of total cover: <u>30</u> <u>60</u> = Total Cover 20% of total cover: <u>12</u>				
<b>Herb Stratum (Plot size: <u>30x30ft</u>)</b>				
1. <u>none</u>	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
50% of total cover: _____ 0 = Total Cover 20% of total cover: _____				
<b>Woody Vine Stratum (Plot size: <u>30x30</u>)</b>				
1. <u>Lonicera japonica</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Smilax rotundifolia</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
50% of total cover: <u>10</u> <u>20</u> = Total Cover 20% of total cover: <u>4</u>				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____				
Remarks: (If observed, list morphological adaptations below).				

SOIL

Sampling Point: wsup014f-w

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>		
0-14	2.5Y4/2	95	10YR9/6	5	C	PL	Loam	
14-20	2.5Y4/1	100					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>:

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Histosol (A1)<br><input type="checkbox"/> Histic Epipedon (A2)<br><input type="checkbox"/> Black Histic (A3)<br><input type="checkbox"/> Hydrogen Sulfide (A4)<br><input type="checkbox"/> Stratified Layers (A5)<br><input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)<br><input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)<br><input type="checkbox"/> Muck Presence (A8) (LRR U)<br><input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)<br><input type="checkbox"/> Depleted Below Dark Surface (A11)<br><input type="checkbox"/> Thick Dark Surface (A12)<br><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)<br><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)<br><input type="checkbox"/> Sandy Gleyed Matrix (S4)<br><input type="checkbox"/> Sandy Redox (S5)<br><input type="checkbox"/> Stripped Matrix (S6)<br><input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)<br><input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)<br><input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)<br><input type="checkbox"/> Loamy Gleyed Matrix (F2)<br><input checked="" type="checkbox"/> Depleted Matrix (F3)<br><input type="checkbox"/> Redox Dark Surface (F6)<br><input type="checkbox"/> Depleted Dark Surface (F7)<br><input type="checkbox"/> Redox Depressions (F8)<br><input type="checkbox"/> Marl (F10) (LRR U)<br><input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)<br><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)<br><input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)<br><input type="checkbox"/> Delta Ochric (F17) (MLRA 151)<br><input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)<br><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)<br><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O)<br><input type="checkbox"/> 2 cm Muck (A10) (LRR S)<br><input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)<br><input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)<br><input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)<br><input type="checkbox"/> Red Parent Material (TF2)<br><input type="checkbox"/> Very Shallow Dark Surface (TF12)<br><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 X No \_\_\_\_\_

Remarks:



*Environmental Field Surveys*  
*Wetland Photo Page*



**Wetland data point wsup014f\_w facing northeast.**



**Wetland data point wsup014f\_w facing southeast.**

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

Project/Site: ACP City/County: Suffolk Sampling Date: 09/15/15  
 Applicant/Owner: DOMINION State: VA Sampling Point: wsup 014-u  
 Investigator(s): R. Turnbull, G. Josefa Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 5-10  
 Subregion (LRR or MLRA): LRRT Lat: 36.66775 Long: -76.83431 Datum: NAD83  
 Soil Map Unit Name: Rains fine sandy 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 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: <p align="center"><i>Abnormally Dry conditions (Based on Sept. 15 Drought Monitor)</i></p>	

**HYDROLOGY**

<p><b>Wetland Hydrology Indicators:</b></p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></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><u>Secondary Indicators (minimum of two required)</u></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 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)
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<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)																																
<p><b>Field Observations:</b></p> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u> (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:																																



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

Sampling Point: WSup014\_u

Tree Stratum (Plot size: <u>30x30ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>none</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)
4. _____				<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>3.11</u>
5. _____				
6. _____				
7. _____				
8. _____				
<u>0</u> = Total Cover 50% of total cover: _____ 20% of total cover: _____				
<b>Sapling/Shrub Stratum (Plot size: <u>30x30ft</u>)</b>				
1. <u>none</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				
<b>Herb Stratum (Plot size: <u>30x30ft</u>)</b>				
1. <u>Phytolacca americana</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Rubus argutus</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Senecio hieracifolius</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
4. <u>Arundinaria gigantea</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>85</u> = Total Cover 50% of total cover: <u>42.5</u> 20% of total cover: <u>17</u>				
<b>Woody Vine Stratum (Plot size: <u>30x30ft</u>)</b>				
1. <u>Vitis rotundifolia</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	
2. _____				
3. _____				
4. _____				
5. _____				
<u>10</u> = Total Cover 50% of total cover: <u>5</u> 20% of total cover: <u>2</u>				
<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>				
Remarks: (If observed, list morphological adaptations below).				

SOIL

Sampling Point: wsup014-u

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	2.5Y4/2	100					Loam	
8-20	2.5Y4/2	100					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.)
- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Histic Sol (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 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:



*Environmental Field Surveys*  
*Wetland Photo Page*



**Upland data point wsup014\_u facing northwest.**



**Upland data point wsup014\_u facing southwest.**

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

Project/Site: ACP City/County: Suffolk Sampling Date: 09/15/15  
 Applicant/Owner: DOMINION State: VA Sampling Point: Wsup013e-w  
 Investigator(s): R. TURNBULL, S. JOSEFA Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Drainage Local relief (concave, convex, none): concave Slope (%): 2-5  
 Subregion (LRR or MLRA): LRRT Lat: 36.66799 Long: -76.83156 Datum: NGS84  
 Soil Map Unit Name: Rains fine sandy loam NWI classification: PEM

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 <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: <p align="center"><u>Abnormally Dry conditions (Based on Sept. 15 Drought Monitor)</u></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 checked="" type="checkbox"/> High Water Table (A2)</td> <td><input type="checkbox"/> Marl Deposits (B15) (LRR U)</td> </tr> <tr> <td><input checked="" 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 checked="" 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 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 checked="" 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 type="checkbox"/> Geomorphic Position (D2)</td></tr> <tr><td><input type="checkbox"/> Shallow Aquitard (D3)</td></tr> <tr><td><input checked="" 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 checked="" type="checkbox"/> FAC-Neutral Test (D5)	<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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<p><b>Field Observations:</b></p> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>8</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____																															
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:																																
Remarks:																																



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

Sampling Point: wsup013e\_w

Tree Stratum (Plot size: <u>30x30ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>none</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. _____				<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 = _____
5. _____				
6. _____				
7. _____				
8. _____				
<u>0</u> = Total Cover 50% of total cover: _____ 20% of total cover: _____				
<b>Sapling/Shrub Stratum (Plot size: <u>30x30ft</u>)</b>				
1. <u>none</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
<u>0</u> = Total Cover 50% of total cover: _____ 20% of total cover: _____				
<b>Herb Stratum (Plot size: <u>30x30ft</u>)</b>				
1. <u>Typha latifolia</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	
2. <u>Rubus argutus</u>	<u>50</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Arundinaria gigantea</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>	
4. <u>Impatiens capensis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
5. <u>Persicaria sagittata</u>	<u>40</u>	<u>Y</u>	<u>OBL</u>	
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>150</u> = Total Cover 50% of total cover: <u>75</u> 20% of total cover: <u>30</u>				
<b>Woody Vine Stratum (Plot size: <u>30x30ft</u>)</b>				
1. <u>none</u>				
2. _____				
3. _____				
4. _____				
5. _____				
<u>0</u> = Total Cover 50% of total cover: _____ 20% of total cover: _____				
<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: (If observed, list morphological adaptations below).				

SOIL

Sampling Point: W sup 013e.w

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 4/2	100					SL	
4-8	10YR 4/2	90	10YR 5/6	10	C	PL	SL	
8-20	10YR 4/1	90	10YR 5/6	10	C	PL	S	

<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 checked="" 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)                  | <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

Remarks:



*Environmental Field Surveys*  
*Wetland Photo Page*



**Wetland data point wsup013e\_w facing south.**



**Wetland data point wsup013e\_w facing southeast.**

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

Project/Site: ACP City/County: Suffolk Sampling Date: 09/15/15  
 Applicant/Owner: DOMINION State: VA Sampling Point: wsup013f.w  
 Investigator(s): R. TURNBULL, G. JOSEFA Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Drainage Local relief (concave, convex, none): Concave Slope (%): 0-2  
 Subregion (LRR or MLRA): LRRT Lat: 36.66758 Long: -76.83182 Datum: NCS84  
 Soil Map Unit Name: Rains fine sandy loam NWI classification: PFO

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 checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: <p align="center"><i>Abnormally Dry conditions (Based on Sept. 15 Drought Monitor)</i></p>	

**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 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 checked="" 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 checked="" 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)
<p><b>Field Observations:</b></p> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>14</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>5</u> (includes capillary fringe)	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: wsup013f-w

Tree Stratum (Plot size: <u>30x30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Magnolia virginiana</u>	<u>50</u>	<u>Yes</u>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A)
2. <u>Tilia opaca</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	Total Number of Dominant Species Across All Strata: <u>7</u> (B)
3. <u>Acer rubrum</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	<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 = _____
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
50% of total cover: <u>50</u> 20% of total cover: <u>20</u> <u>100</u> = Total Cover				
<b>Sapling/Shrub Stratum (Plot size: <u>30x30</u>)</b>				
1. <u>Alnus serrulata</u>	<u>40</u>	<u>Yes</u>	<u>FACW</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
50% of total cover: <u>20</u> 20% of total cover: <u>8</u> <u>40</u> = Total Cover				
<b>Herb Stratum (Plot size: <u>30x30</u>)</b>				
1. <u>Woodwardia areolata</u>	<u>40</u>	<u>Yes</u>	<u>OBL</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>Arundinaria gigantea</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
50% of total cover: <u>30</u> 20% of total cover: <u>12</u> <u>60</u> = Total Cover				
<b>Woody Vine Stratum (Plot size: <u>30x30</u>)</b>				
1. <u>Smilax rotundifolia</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
50% of total cover: <u>5</u> 20% of total cover: <u>2</u> <u>10</u> = Total Cover				

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

SOIL

Sampling Point: wsup013f.w

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	10YR 2/1	100					Loam	
10-20	10YR 3/1	100					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.)
- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Histic Epipedon (A2)                  | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)                 | <input type="checkbox"/> 1 cm Muck (A9) (LRR O)   |
| <input type="checkbox"/> Black Histic (A3)                     | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)                       | <input type="checkbox"/> 2 cm Muck (A10) (LRR S)  |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                 | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)                           | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)   |
| <input type="checkbox"/> Stratified Layers (A5)                | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                                   | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)  |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)     | <input type="checkbox"/> Depleted Matrix (F3)                                       | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)   |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6)                                    | <input type="checkbox"/> Red Parent Material (TF2)  |
| <input type="checkbox"/> Muck Presence (A8) (LRR U)            | <input type="checkbox"/> Depleted Dark Surface (F7)                                 | <input type="checkbox"/> Very Shallow Dark Surface (TF12)   |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)             | <input type="checkbox"/> Redox Depressions (F8)                                     | <input type="checkbox"/> Other (Explain in Remarks)   |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)     | <input type="checkbox"/> Marl (F10) (LRR U)   |   |
| <input type="checkbox"/> Thick Dark Surface (A12)              | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)                           |   |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <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"/> Sandy Mucky Mineral (S1) (LRR O, S)   | <input checked="" type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)              |   |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)              | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151)                              |   |
| <input type="checkbox"/> Sandy Redox (S5)                      | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)                     |   |
| <input type="checkbox"/> Stripped Matrix (S6)                  | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)                |   |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)    | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |   |

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

Hydric Soil Present? Yes  No

Remarks:



*Environmental Field Surveys*  
*Wetland Photo Page*



**Wetland data point wsup013f\_w facing north.**



**Wetland data point wsup013f\_w facing west.**

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

Project/Site: ACP City/County: Suffolk Sampling Date: 09/15/15  
 Applicant/Owner: DOMINION State: VA Sampling Point: wsup013-u  
 Investigator(s): R. TURNBULL, S. JOSEFA Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): HILLSLOPE Local relief (concave, convex, none): Concave Slope (%): 4-10  
 Subregion (LRR or MLRA): LRRT Lat: 36.66792 Long: -76.83229 Datum: NAD 83  
 Soil Map Unit Name: Rains fine sandy loam NWI classification: N/A

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>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: <p align="center"><u>Abnormally Dry conditions (Based on Sept. 15 Drought Monitor)</u></p>	

**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 _____ No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>&gt;20</u> Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>&gt;20</u> (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	



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

Sampling Point: wsup013-u

Tree Stratum (Plot size: <u>30x30ft.</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>none</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2.				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4.				<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>2.18</u>
5.				
6.				
7.				
8.				
0 = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Sapling/Shrub Stratum (Plot size: <u>30x30ft.</u>)</b>				
1. <u>none</u>				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
0 = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Herb Stratum (Plot size: <u>30x30ft.</u>)</b>				
1. <u>Persicaria sagittata</u>	<u>40</u>	<u>Yes</u>	<u>OBL</u>	
2. <u>Rubus argutus</u>	<u>50</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Phytolacca americana</u>	<u>20</u>	<u>NO</u>	<u>FACU</u>	
4. <u>Onoclea sensibilis</u>	<u>5</u>	<u>NO</u>	<u>FACW</u>	
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
115 = Total Cover				
50% of total cover: <u>57.5</u> 20% of total cover: <u>23</u>				
<b>Woody Vine Stratum (Plot size: <u>30x30ft.</u>)</b>				
1. <u>VITIS rotundifolia</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	
2.				
3.				
4.				
5.				
10 = Total Cover				
50% of total cover: <u>5</u> 20% of total cover: <u>2</u>				
<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
<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>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: WSUP 013-4

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>		
0-20	10YR 4/2	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)	<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*  
*Wetland Photo Page*



**Upland data point wsup013\_u facing southwest.**



**Upland data point wsup013\_u facing west.**

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

Project/Site: ACP City/County: SUFFOLK Sampling Date: 12/9/15  
 Applicant/Owner: DOMINION State: VA Sampling Point: wsup026e-w  
 Investigator(s): ESI-M. SMITH, K. MURPHY Section, Township, Range: NA  
 Landform (hillslope, terrace, etc.): DEPRESSION Local relief (concave, convex, none): CONCAVE Slope (%): 0-2  
 Subregion (LRR or MLRA): LRR T Lat: 36.66863 Long: -76.8249 Datum: WGS 84  
 Soil Map Unit Name: Levy silty clay loam NWI classification: PEM  
 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 checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required, check all that apply)</u> <input checked="" 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 checked="" type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input checked="" 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 checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>4"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>SURFACE</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>SURFACE</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: ws up 026e-w

Tree Stratum (Plot size: <u>30ft X 30ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>None present</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. _____				<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 = _____
5. _____				
6. _____				
7. _____				
8. _____				
<u>0</u> = Total Cover 50% of total cover: _____ 20% of total cover: _____				
<b>Sapling/Shrub Stratum (Plot size: <u>30ft X 30ft</u>)</b>				
1. <u>Cephalanthus occidentalis</u>	<u>50</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Acer rubrum</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
3. <u>Taxodium distichum</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
<u>60</u> = Total Cover 50% of total cover: <u>30</u> 20% of total cover: <u>12</u>				
<b>Herb Stratum (Plot size: <u>30ft X 30ft</u>)</b>				
1. <u>Panicum sp.</u>	<u>20</u>	<u>N</u>	<u>UNK</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>Juncus effusus</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
3. <u>Arundinaria gigantea</u>	<u>45</u>	<u>Y</u>	<u>FACW</u>	
4. <u>Saccharum giganteum</u>	<u>20</u>	<u>N</u>	<u>FACW</u>	
5. <u>Panicaria sagittata</u>	<u>20</u>	<u>N</u>	<u>OBL</u>	
6. <u>Eupatorium capillifolium</u>	<u>1</u>	<u>N</u>	<u>FACU</u>	
7. <u>Rubus argutus</u>	<u>1</u>	<u>N</u>	<u>FAC</u>	
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>112</u> = Total Cover 50% of total cover: <u>56</u> 20% of total cover: <u>22.4</u>				
<b>Woody Vine Stratum (Plot size: <u>30ft X 30ft</u>)</b>				
1. <u>Lonicera japonica</u>	<u>1</u>	<u>N</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. <u>Smilax rotundifolia</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	
3. _____				
4. _____				
5. _____				
<u>11</u> = Total Cover 50% of total cover: <u>5.5</u> 20% of total cover: <u>2.2</u>				
Remarks: (If observed, list morphological adaptations below).				

**SOIL**

Sampling Point: wsup026e-w

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	10YR3/2	100					L	
4-12	10YR 5/1	90	10YR5/6	10	C	PL	SCL	
12-20	2.5Y6/2	80	2.5Y5/6	20	C	M	SC	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.					<sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>					<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>			
<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 checked="" 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)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<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)								
<b>Restrictive Layer (if observed):</b>						Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Type: _____								
Depth (inches): _____								
Remarks:								



*Environmental Field Surveys*  
*Wetland Photo Page*



**Wetland data point wsup026e\_w facing northeast.**



**Wetland data point wsup026e\_w facing southwest.**

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

Project/Site: ACP City/County: Suffolk Sampling Date: 12/9/15  
 Applicant/Owner: Dominion State: VA Sampling Point: WSup026f-w  
 Investigator(s): ESI-M. Smith, K. Murphy Section, Township, Range: NA  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): CONCAVE Slope (%): 0-2  
 Subregion (LRR or MLRA): LRR T Lat: 36.66841 Long: -76.82355 Datum: N6584  
 Soil Map Unit Name: Levy silty clay loam NWI classification: PFO  
 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 checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: <u>Beaver pond</u>	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" 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 checked="" 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 checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>4"</u> Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1"</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: wsup026f.w

Tree Stratum (Plot size: <u>20ft X 30ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Acer rubrum</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Liquidambar styraciflua</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
50 = Total Cover				
50% of total cover: <u>25</u> 20% of total cover: <u>10</u>				
Sapling/Shrub Stratum (Plot size: <u>30ft X 30ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Ilex opaca</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Ligustrum sinense</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Carpinus caroliniana</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
75 = Total Cover				
50% of total cover: <u>37.5</u> 20% of total cover: <u>15</u>				
Herb Stratum (Plot size: <u>30ft X 30ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Woodwardia virginica</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	
2. <u>Woodwardia areolata</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
40 = Total Cover				
50% of total cover: <u>20</u> 20% of total cover: <u>12</u>				
Woody Vine Stratum (Plot size: <u>30ft X 30ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Lonicera japonica</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
2. <u>Smilax rotundifolia</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
3. <u>Vitis rotundifolia</u>	<u>50</u>	<u>Y</u>	<u>FAC</u>	
4. <u>Gelsemium sempervirens</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
5. _____				
65 = Total Cover				
50% of total cover: <u>32.5</u> 20% of total cover: <u>13</u>				

**Dominance Test worksheet:**

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (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).

**SOIL**

Sampling Point: wsup026f\_w

**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>		
0-1	10YR 4/1	100					L	
1-10	2.5Y 6/2	90	10YR 5/6	10			LS	
10-20	10YR 5/1	80	10YR 4/6	20	C	PL	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"/> 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 checked="" 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)	<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

Remarks:



*Environmental Field Surveys*  
*Wetland Photo Page*



**Wetland data point wsup026f\_w facing northwest.**



**Wetland data point wsup026f\_w facing southwest.**



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

Project/Site: ACP City/County: SUFFOLK Sampling Date: 12/9/15  
 Applicant/Owner: DOMINION State: VA Sampling Point: WSUP026-U  
 Investigator(s): EST-M. Smith, K. Murphy Section, Township, Range: NA  
 Landform (hillslope, terrace, etc.): HILLSLOPE Local relief (concave, convex, none): CONVEX Slope (%): 24  
 Subregion (LRR or MLRA): LRR T Lat: 36.66845 Long: -76.82336 Datum: NAD83  
 Soil Map Unit Name: LEVY Silty clay loam 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 <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? 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) (LRR U) ___ Saturation (A3)                            ___ Hydrogen Sulfide Odor (C1) ___ Water Marks (B1) <input checked="" type="checkbox"/> 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) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>NA</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u> Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:	



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

Sampling Point: WSUP026.u

Tree Stratum (Plot size: <u>30ft X 30ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Platanus occidentalis</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>8</u> (A)
2. <u>Pinus taeda</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	Total Number of Dominant Species Across All Strata: <u>10</u> (B)
3. <u>Liquidambar styraciflua</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80%</u> (A/B)
4. _____	_____	_____	_____	<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 = _____
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>55</u> = Total Cover 50% of total cover: <u>27.5</u> 20% of total cover: <u>11</u>				
<b>Sapling/Shrub Stratum (Plot size: <u>30ft X 30ft</u>)</b>				
1. <u>Ilex opaca</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Ligustrum sinense</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Carpinus caroliniana</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
<u>25</u> = Total Cover 50% of total cover: <u>12.5</u> 20% of total cover: <u>5</u>				
<b>Herb Stratum (Plot size: <u>30ft X 30ft</u>)</b>				
1. <u>Arundinaria gigantea</u>	<u>5</u>	<u>N</u>	<u>FACW</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>Potentilla simplex</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Phytolacca americana</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
4. <u>Allium canadense</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
5. <u>Woodwardia areolata</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>30</u> = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u>				
<b>Woody Vine Stratum (Plot size: <u>30ft X 30ft</u>)</b>				
1. <u>Lonicera japonica</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. <u>Vitis rotundifolia</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Berchemia scandens</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>50</u> = Total Cover 50% of total cover: <u>25</u> 20% of total cover: <u>10</u>				
Remarks: (If observed, list morphological adaptations below).				

**SOIL**

Sampling Point: WSup 026-u

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	2.5y 6/4	100					FSL	
10-14	2.5y 5/3	100					SCL	
14-20	2.5y 4/2	98	10yR4/6	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.)	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"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)
<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 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:



*Environmental Field Surveys*  
*Wetland Photo Page*



**Upland data point wsup026\_u facing northeast.**



**Upland data point wsup026\_u facing southwest.**

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

Project/Site: ACP City/County: SUFFOLK Sampling Date: 12/9/15  
 Applicant/Owner: Dominion State: VA Sampling Point: WS4P025F-W  
 Investigator(s): EST-M. Smith, K. Murphy Section, Township, Range: NA  
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): CONCAVE Slope (%): 0-2  
 Subregion (LRR or MLRA): LRR T Lat: 36.66764 Long: -76.81936 Datum: WGS 84  
 Soil Map Unit Name: Rains fine sandy loam NWI classification: PFO  
 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 checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply)	<b>Secondary Indicators (minimum of two required)</b>
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input 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)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>SURFACE</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>SURFACE</u> (includes capillary fringe)	<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)
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: wsup025f-w

Tree Stratum (Plot size: <u>30ft X 30ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Liquidambar styraciflua</u>	<u>40</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>7</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>86%</u> (A/B)	
2. <u>Acer rubrum</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
80 = Total Cover 50% of total cover: <u>40</u> 20% of total cover: <u>16</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 = _____	
Sapling/Shrub Stratum (Plot size: <u>30ft X 30ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Ilex opaca</u>	<u>15</u>	<u>Y</u>	<u>FAC</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)
2. <u>Magnolia virginiana</u>	<u>5</u>	<u>N</u>	<u>FACW</u>		
3. <u>Cyrilla racemiflora</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>		
4. <u>Ligustrum sinense</u>	<u>2</u>	<u>N</u>	<u>FAC</u>		
5. <u>Carpinus caroliniana</u>	<u>5</u>	<u>N</u>	<u>FAC</u>		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
37 = Total Cover 50% of total cover: <u>18.5</u> 20% of total cover: <u>7.4</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.
Herb Stratum (Plot size: <u>30ft X 30ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Woodwardia areolata</u>	<u>20</u>	<u>Y</u>	<u>OBL</u>	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
2. <u>Botrypus virginianus</u>	<u>2</u>	<u>N</u>	<u>FACU</u>		
3. <u>Osmundastrum cinnamomeum</u>	<u>5</u>	<u>N</u>	<u>FACW</u>		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
27 = Total Cover 50% of total cover: <u>13.5</u> 20% of total cover: <u>5.4</u>					
Woody Vine Stratum (Plot size: <u>30ft X 30ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Lonicera japonica</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
2. <u>Bignonia capreolata</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>		
3. <u>Smilax rotundifolia</u>	<u>2</u>	<u>N</u>	<u>FAC</u>		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
32 = Total Cover 50% of total cover: <u>16</u> 20% of total cover: <u>6.4</u>					
Remarks: (If observed, list morphological adaptations below).   					





*Environmental Field Surveys*  
*Wetland Photo Page*



**Wetland data point wsup025f\_w facing northwest.**



**Wetland data point wsup025f\_w facing south.**

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

Project/Site: ACP City/County: Suffolk Sampling Date: 12/9/15  
 Applicant/Owner: Dominion State: VA Sampling Point: wsup025e-w  
 Investigator(s): ESI-M. Smith, K. Murphy Section, Township, Range: NA  
 Landform (hillslope, terrace, etc.): DEPRESSION Local relief (concave, convex, none): CONCAVE Slope (%): 0-2  
 Subregion (LRR or MLRA): LRR T Lat: 36.66765 Long: -76.81896 Datum: NAD 83  
 Soil Map Unit Name: Rains Fine sandy loam NWI classification: PEM  
 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 checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required, check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input 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"/> 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 checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2"</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>SURFACE</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:	