

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline City/County: Highland County Sampling Date: 11/18/2015
 Applicant/Owner: Dominion State: VA Sampling Point: whie006e_w
 Investigator(s): CG, AS Section, Township, Range: No PLSS in this area
 Landform (hillslope, terrace, etc.): toe of slope Local relief (concave, convex, none): none Slope (%): 4
 Subregion (LRR or MLRA): S Lat: 38.33666695 Long: -79.50429015 Datum: WGS 1984
 Soil Map Unit Name: Oriskany cobbly sandy loam, 8 to 15 percent slopes, extremely stony 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"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks: Cattle grazing and rutting | |

HYDROLOGY

| | |
|---|---|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |
| Field Observations: 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 checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</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: whie006e_w

| | Absolute % Cover | Dominant Species? | Indicator Status | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---------------------|-------------------------------|---------------------|---|-------------------|-------|--------------|-------|-------------|----------|-------|----------|--------------|-----------|-------|-----------|-------------|-----------|-------|------------|--------------|----------|-------|----------|-------------|----------|-------|----------|----------------|-----------|-----|------------|-------------------------------------|--|--|--|
| Tree Stratum (Plot size: <u>30</u>) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| _____ = Total Cover | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>0</u> | | 20% of total cover: <u>0</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sapling/Shrub Stratum (Plot size: <u>15</u>) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. _____ | _____ | _____ | _____ | Prevalence Index worksheet: <table style="width:100%; border:none;"> <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>0</u></td> <td>x 1 =</td> <td style="text-align:center;"><u>0</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align:center;"><u>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>40</u></td> <td>x 3 =</td> <td style="text-align:center;"><u>120</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align:center;"><u>0</u></td> <td>x 4 =</td> <td style="text-align:center;"><u>0</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align:center;"><u>0</u></td> <td>x 5 =</td> <td style="text-align:center;"><u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td style="text-align:center;"><u>50</u></td> <td>(A)</td> <td style="text-align:center;"><u>140</u></td> (B) </tr> <tr> <td colspan="4" style="text-align:center;">Prevalence Index = B/A = <u>2.8</u></td> </tr> </table> | Total % Cover of: | _____ | Multiply by: | _____ | OBL species | <u>0</u> | x 1 = | <u>0</u> | FACW species | <u>10</u> | x 2 = | <u>20</u> | FAC species | <u>40</u> | x 3 = | <u>120</u> | FACU species | <u>0</u> | x 4 = | <u>0</u> | UPL species | <u>0</u> | x 5 = | <u>0</u> | Column Totals: | <u>50</u> | (A) | <u>140</u> | Prevalence Index = B/A = <u>2.8</u> | | | |
| Total % Cover of: | _____ | Multiply by: | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OBL species | <u>0</u> | x 1 = | <u>0</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FACW species | <u>10</u> | x 2 = | <u>20</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FAC species | <u>40</u> | x 3 = | <u>120</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FACU species | <u>0</u> | x 4 = | <u>0</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UPL species | <u>0</u> | x 5 = | <u>0</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Column Totals: | <u>50</u> | (A) | <u>140</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = <u>2.8</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| _____ = Total Cover | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>0</u> | | 20% of total cover: <u>0</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Herb Stratum (Plot size: <u>5</u>) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. <i>Dichanthelium clandestinum</i> | 40 | Yes | FAC | Hydrophytic Vegetation Indicators: <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 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. <i>Juncus effusus</i> | 10 | Yes | FACW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| _____ = Total Cover | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>25</u> | | 20% of total cover: <u>10</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Woody Vine Stratum (Plot size: <u>30</u>) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. _____ | _____ | _____ | _____ | 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 or equal to 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. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| _____ = Total Cover | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>0</u> | | 20% of total cover: <u>0</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Remarks: (Include photo numbers here or on a separate sheet.) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

SOIL

Sampling Point: whie006e_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 ¹ | Loc ² | | |
| 0-12 | 10YR 4/2 | 90 | 7.5YR 3/4 | 10 | C | PL/M | CL | |
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¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : |
|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> (MLRA 147, 148) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> (MLRA 136, 147) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Thick Dark Surface (A12) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | |
| <input type="checkbox"/> Sandy Redox (S5) | |
| <input type="checkbox"/> Stripped Matrix (S6) | |
| <input type="checkbox"/> Dark Surface (S7) | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) | |
| <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | |
| <input type="checkbox"/> Loamy Gleyed Matrix (F2) | |
| <input checked="" type="checkbox"/> Depleted Matrix (F3) | |
| <input type="checkbox"/> Redox Dark Surface (F6) | |
| <input type="checkbox"/> Depleted Dark Surface (F7) | |
| <input type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136) | |
| <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) | |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) | |
| <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) | |

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

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

Remarks:
Cobble at 12 inches



Photo 1
Wetland data point whie006e_w facing east



Photo 2
Wetland data point whie006e_w facing north

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline City/County: Highland County Sampling Date: 11/18/2015
 Applicant/Owner: Dominion State: VA Sampling Point: whie006_u
 Investigator(s): CG, AS Section, Township, Range: No PLSS in this area
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR or MLRA): S Lat: 38.33659817 Long: -79.50432104 Datum: WGS 1984
 Soil Map Unit Name: Oriskany cobbly sandy loam, 8 to 15 percent slopes, extremely stony 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"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks: | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5) |
|--|--|

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

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

Remarks:
 No hydrology

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

Sampling Point: whie006_u

| | Absolute % Cover | Dominant Species? | Indicator Status | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------------|-------------------|------------------|--|----------------|-------------------|--|--------------|--|-------------|----------|--|-------|----------|--------------|----------|--|-------|----------|-------------|-----------|--|-------|-----------|--------------|------------|--|-------|------------|-------------|-----------|--|-------|-----------|----------------|------------|-----|--|----------------|--------------------------|--|--|--|-------------|
| Tree Stratum (Plot size: <u>30</u>) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. _____ | _____ | _____ | _____ | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| $\frac{0}{30} = \text{Total Cover}$ 50% of total cover: <u>0</u> 20% of total cover: <u>0</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sapling/Shrub Stratum (Plot size: <u>15</u>) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. <i>Rosa multiflora</i> | 15 | Yes | FACU | Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <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>0</u></td> <td></td> <td style="text-align: center;">x 1 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 2 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>15</u></td> <td></td> <td style="text-align: center;">x 3 =</td> <td style="text-align: center;"><u>45</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>115</u></td> <td></td> <td style="text-align: center;">x 4 =</td> <td style="text-align: center;"><u>460</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>10</u></td> <td></td> <td style="text-align: center;">x 5 =</td> <td style="text-align: center;"><u>50</u></td> </tr> <tr> <td>Column Totals:</td> <td style="text-align: center;"><u>140</u></td> <td style="text-align: center;">(A)</td> <td></td> <td style="text-align: center;"><u>555</u> (B)</td> </tr> <tr> <td colspan="4" style="text-align: right;">Prevalence Index = B/A =</td> <td style="text-align: center;"><u>3.96</u></td> </tr> </table> | | 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>15</u> | | x 3 = | <u>45</u> | FACU species | <u>115</u> | | x 4 = | <u>460</u> | UPL species | <u>10</u> | | x 5 = | <u>50</u> | Column Totals: | <u>140</u> | (A) | | <u>555</u> (B) | Prevalence Index = B/A = | | | | <u>3.96</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>15</u> | | x 3 = | | <u>45</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FACU species | <u>115</u> | | x 4 = | | <u>460</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UPL species | <u>10</u> | | x 5 = | | <u>50</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Column Totals: | <u>140</u> | (A) | | | <u>555</u> (B) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = | | | | | <u>3.96</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| $\frac{15}{15} = \text{Total Cover}$ 50% of total cover: <u>7.5</u> 20% of total cover: <u>3</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Herb Stratum (Plot size: <u>5</u>) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. <i>Trifolium pratense</i> | 35 | Yes | FACU | Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is $\leq 3.0^1$ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. <i>Poa pratensis</i> | 30 | Yes | FACU | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. <i>Trifolium repens</i> | 30 | Yes | FACU | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. <i>Daucus carota</i> | 10 | No | UPL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. <i>Juncus tenuis</i> | 10 | No | FAC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. <i>Setaria pumila</i> | 5 | No | FAC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. <i>Berberis thunbergii</i> | 5 | No | FACU | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| $\frac{125}{5} = \text{Total Cover}$ 50% of total cover: <u>62.5</u> 20% of total cover: <u>25</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Woody Vine Stratum (Plot size: <u>30</u>) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. _____ | _____ | _____ | _____ | 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 or equal to 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. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. _____ | _____ | _____ | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| $\frac{0}{30} = \text{Total Cover}$ 50% of total cover: <u>0</u> 20% of total cover: <u>0</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Remarks: (Include photo numbers here or on a separate sheet.) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

SOIL

Sampling Point: whie006_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 ¹ | Loc ² | | |
| 0-8 | 10YR 3/2 | 100 | | | | | L | |
| 8-14 | 7.5YR 4/4 | 100 | | | | | CL | |
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¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils³: | |
|--|--|---|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) | |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) | <input type="checkbox"/> Coast Prairie Redox (A16) | |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> (MLRA 147, 148) | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) | |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> (MLRA 136, 147) | |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Other (Explain in Remarks) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) | | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) | | |

³Indicators 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 <input checked="" type="checkbox"/> |
|---|---|

Remarks:



Photo 1
Upland data point whie006_u facing north



Photo 2
Upland data point whie006_u facing south

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline City/County: Highland County Sampling Date: 11/17/2015
 Applicant/Owner: Dominion State: VA Sampling Point: whie005e_w
 Investigator(s): CG, AS Section, Township, Range: No PLSS in this area
 Landform (hillslope, terrace, etc.): slope Local relief (concave, convex, none): concave Slope (%): 4
 Subregion (LRR or MLRA): S Lat: 38.33669689 Long: -79.50356685 Datum: WGS 1984
 Soil Map Unit Name: Cottonbend silt loam, 3 to 8 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"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks: Cattle access and road | |

HYDROLOGY

| | |
|---|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5) |
|---|--|

| | |
|---|---|
| Field Observations: 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 checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</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: whie005e_w

| | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|---------------------|-------------------------------|---------------------|--|
| Tree Stratum (Plot size: <u>30</u>) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: <u>0</u> | | 20% of total cover: <u>0</u> | | |
| Sapling/Shrub Stratum (Plot size: <u>15</u>) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: <u>0</u> | | 20% of total cover: <u>0</u> | | |
| Herb Stratum (Plot size: <u>5</u>) | | | | |
| 1. <i>Dichanthelium clandestinum</i> | 30 | Yes | FAC | |
| 2. <i>Juncus effusus</i> | 20 | Yes | FACW | |
| 3. <i>Poa palustris</i> | 10 | No | FACW | |
| 4. <i>Poa pratensis</i> | 10 | No | FACU | |
| 5. <i>Trifolium repens</i> | 5 | No | FACU | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| _____ = Total Cover | | | | |
| 50% of total cover: <u>37.5</u> | | 20% of total cover: <u>15</u> | | |
| Woody Vine Stratum (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: (Include photo numbers here or on a separate sheet.) | | | | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (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>30</u> | x 2 = <u>60</u> |
| FAC species <u>30</u> | x 3 = <u>90</u> |
| FACU species <u>15</u> | x 4 = <u>60</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>75</u> (A) | <u>210</u> (B) |

Prevalence Index = B/A = 2.8

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators 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 or equal to 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: whie005e_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 ¹ | Loc ² | | |
| 0-3 | 10YR 4/1 | 98 | 5YR 4/6 | 2 | C | M | CL | |
| 3-10 | 10YR 5/2 | 90 | 7.5YR 3/4 | 10 | C | PL/M | CL | |
| | | | | | | | | |
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¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> (MLRA 147, 148) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> (MLRA 136, 147) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Thick Dark Surface (A12) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | |
| <input type="checkbox"/> Sandy Redox (S5) | |
| <input type="checkbox"/> Stripped Matrix (S6) | |
| <input type="checkbox"/> Dark Surface (S7) | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) | |
| <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | |
| <input type="checkbox"/> Loamy Gleyed Matrix (F2) | |
| <input checked="" type="checkbox"/> Depleted Matrix (F3) | |
| <input type="checkbox"/> Redox Dark Surface (F6) | |
| <input type="checkbox"/> Depleted Dark Surface (F7) | |
| <input type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136) | |
| <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) | |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) | |
| <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) | |

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

| | |
|---|--|
| Restrictive Layer (if observed): Type: <u>cobble</u> Depth (inches): <u>10</u> | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|---|--|

Remarks:
Cobble at 10 inches



Photo 1
Wetland data point whie005e_w facing southeast



Photo 2
Wetland data point whie005e_w facing northeast

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline City/County: Highland County Sampling Date: 11/17/2015
 Applicant/Owner: Dominion State: VA Sampling Point: whie005_u
 Investigator(s): CG, AS 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): S Lat: 38.33674155 Long: -79.50366897 Datum: WGS 1984
 Soil Map Unit Name: Cottonbend silt loam, 3 to 8 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"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks: cow pasture | |

HYDROLOGY

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

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

Sampling Point: whie005_u

| | Absolute % Cover | Dominant Species? | Indicator Status | | | | | | | | | | | | | | | | | |
|---|------------------|-------------------|------------------|---|-------------------|--------------|----------------------|----------------|-----------------------|-----------------|----------------------|-----------------|------------------------|------------------|----------------------|-----------------|-------------------------------|----------------|--------------------------------------|--|
| Tree Stratum (Plot size: <u>30</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <i>Quercus rubra</i> | 10 | Yes | FACU | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B) | | | | | | | | | | | | | | | | |
| 2. <i>Juniperus virginiana</i> | 3 | Yes | FACU | | | | | | | | | | | | | | | | | |
| 3. _____ | | | | | | | | | | | | | | | | | | | | |
| 4. _____ | | | | | | | | | | | | | | | | | | | | |
| 5. _____ | | | | | | | | | | | | | | | | | | | | |
| 6. _____ | | | | | | | | | | | | | | | | | | | | |
| 7. _____ | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>6.5</u> 20% of total cover: <u>2.6</u> | 13 | = Total Cover | | | | | | | | | | | | | | | | | | |
| Sapling/Shrub Stratum (Plot size: <u>15</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <i>Juniperus virginiana</i> | 5 | Yes | FACU | Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:right">Total % Cover of:</td> <td style="text-align:center">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>8</u></td> <td>x 3 = <u>24</u></td> </tr> <tr> <td>FACU species <u>88</u></td> <td>x 4 = <u>352</u></td> </tr> <tr> <td>UPL species <u>7</u></td> <td>x 5 = <u>35</u></td> </tr> <tr> <td>Column Totals: <u>108</u> (A)</td> <td><u>421</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center">Prevalence Index = B/A = <u>3.89</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <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 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (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>8</u> | x 3 = <u>24</u> | FACU species <u>88</u> | x 4 = <u>352</u> | UPL species <u>7</u> | x 5 = <u>35</u> | Column Totals: <u>108</u> (A) | <u>421</u> (B) | Prevalence Index = B/A = <u>3.89</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>8</u> | x 3 = <u>24</u> | | | | | | | | | | | | | | | | | | | |
| FACU species <u>88</u> | x 4 = <u>352</u> | | | | | | | | | | | | | | | | | | | |
| UPL species <u>7</u> | x 5 = <u>35</u> | | | | | | | | | | | | | | | | | | | |
| Column Totals: <u>108</u> (A) | <u>421</u> (B) | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = <u>3.89</u> | | | | | | | | | | | | | | | | | | | | |
| 2. _____ | | | | | | | | | | | | | | | | | | | | |
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| 4. _____ | | | | | | | | | | | | | | | | | | | | |
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| 6. _____ | | | | | | | | | | | | | | | | | | | | |
| 7. _____ | | | | | | | | | | | | | | | | | | | | |
| 8. _____ | | | | | | | | | | | | | | | | | | | | |
| 9. _____ | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>2.5</u> 20% of total cover: <u>1</u> | 5 | = Total Cover | | | | | | | | | | | | | | | | | | |
| Herb Stratum (Plot size: <u>5</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. <i>Andropogon virginicus</i> | 40 | Yes | FACU | 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 or equal to 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. <i>Poa pratensis</i> | 20 | Yes | FACU | | | | | | | | | | | | | | | | | |
| 3. <i>Rosa multiflora</i> | 10 | No | FACU | | | | | | | | | | | | | | | | | |
| 4. <i>Daucus carota</i> | 7 | No | UPL | | | | | | | | | | | | | | | | | |
| 5. <i>Poa palustris</i> | 5 | No | FACW | | | | | | | | | | | | | | | | | |
| 6. <i>Juncus tenuis</i> | 5 | No | FAC | | | | | | | | | | | | | | | | | |
| 7. <i>Setaria pumila</i> | 3 | No | FAC | | | | | | | | | | | | | | | | | |
| 8. _____ | | | | | | | | | | | | | | | | | | | | |
| 9. _____ | | | | | | | | | | | | | | | | | | | | |
| 10. _____ | | | | | | | | | | | | | | | | | | | | |
| 11. _____ | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>45</u> 20% of total cover: <u>18</u> | 90 | = Total Cover | | | | | | | | | | | | | | | | | | |
| Woody Vine Stratum (Plot size: <u>30</u>) | | | | | | | | | | | | | | | | | | | | |
| 1. _____ | | | | Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | |
| 2. _____ | | | | | | | | | | | | | | | | | | | | |
| 3. _____ | | | | | | | | | | | | | | | | | | | | |
| 4. _____ | | | | | | | | | | | | | | | | | | | | |
| 5. _____ | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>0</u> 20% of total cover: <u>0</u> | 0 | = Total Cover | | | | | | | | | | | | | | | | | | |

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: whie005_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 ¹ | Loc ² | | |
| 0-10 | 10YR 3/2 | 98 | 7.5 YR 3/4 | 2 | C | M | CL | |
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¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| | | | |
|--|--|---|--|
| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils³: | |
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) | |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) | <input type="checkbox"/> Coast Prairie Redox (A16) | |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> (MLRA 147, 148) | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) | |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> (MLRA 136, 147) | |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Other (Explain in Remarks) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) | | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) | | |

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

Restrictive Layer (if observed):
 Type: cobble
 Depth (inches): 10

Hydric Soil Present? Yes No

Remarks:
 cobble at 10 inches



Photo 1
Upland data point whie005_u facing south



Photo 2
Upland data point whie005_u facing north

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline City/County: Highland County Sampling Date: 11/17/2015
 Applicant/Owner: Dominion State: VA Sampling Point: whie003e_w
 Investigator(s): CG, AS Section, Township, Range: No PLSS in this area
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR or MLRA): S Lat: 38.33752308 Long: -79.50251975 Datum: WGS 1984
 Soil Map Unit Name: Nicelytown silt loam, 3 to 8 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 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: Cattle access, attempt to drain wetland in past. | |

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) | <u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes <input 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: whie003e_w

| | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|---------------------|----------------------|---------------------|--|
| Tree Stratum (Plot size: <u>30</u>) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| $\frac{0}{100} = \text{Total Cover}$ 50% of total cover: <u>0</u> 20% of total cover: <u>0</u> | | | | |
| Sapling/Shrub Stratum (Plot size: <u>15</u>) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| $\frac{0}{100} = \text{Total Cover}$ 50% of total cover: <u>0</u> 20% of total cover: <u>0</u> | | | | |
| Herb Stratum (Plot size: <u>5</u>) | | | | |
| 1. <i>Dichanthelium clandestinum</i> | 70 | Yes | FAC | |
| 2. <i>Trifolium repens</i> | 30 | Yes | FACU | |
| 3. <i>Juncus tenuis</i> | 15 | No | FAC | |
| 4. <i>Setaria pumila</i> | 15 | No | FAC | |
| 5. <i>Poa palustris</i> | 5 | No | FACW | |
| 6. <i>Juncus effusus</i> | 2 | No | FACW | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| $\frac{137}{100} = \text{Total Cover}$ 50% of total cover: <u>68.5</u> 20% of total cover: <u>27.4</u> | | | | |
| Woody Vine Stratum (Plot size: <u>30</u>) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| $\frac{0}{100} = \text{Total Cover}$ 50% of total cover: <u>0</u> 20% of total cover: <u>0</u> | | | | |
| Remarks: (Include photo numbers here or on a separate sheet.) | | | | |

| | |
|---|------------------|
| Dominance Test worksheet: | |
| Number of Dominant Species That Are OBL, FACW, or FAC: | <u>1</u> (A) |
| Total Number of Dominant Species Across All Strata: | <u>2</u> (B) |
| Percent of Dominant Species That Are OBL, FACW, or FAC: | <u>50</u> (A/B) |
| Prevalence Index worksheet: | |
| 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>100</u> | x 3 = <u>300</u> |
| FACU species <u>30</u> | x 4 = <u>120</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>137</u> (A) | <u>434</u> (B) |
| Prevalence Index = B/A = <u>3.16</u> | |
| Hydrophytic Vegetation Indicators: | |
| <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 ¹ | |
| <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | |
| <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | |
| ¹ 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 or equal to 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 <input checked="" type="checkbox"/> | |

SOIL

Sampling Point: whie003e_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 ¹ | Loc ² | | |
| 0-12 | 10YR 4/1 | 90 | 2.5YR 3/6 | 10 | C | PL/M | SICL | |
| 12-14 | 2.5Y 5/3 | 92 | 5YR 3/4 | 8 | C | PL | CL | |
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¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> (MLRA 147, 148) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> (MLRA 136, 147) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Thick Dark Surface (A12) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | |
| <input type="checkbox"/> Sandy Redox (S5) | |
| <input type="checkbox"/> Stripped Matrix (S6) | |
| <input type="checkbox"/> Dark Surface (S7) | |
| <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) | |
| <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | |
| <input type="checkbox"/> Loamy Gleyed Matrix (F2) | |
| <input checked="" type="checkbox"/> Depleted Matrix (F3) | |
| <input type="checkbox"/> Redox Dark Surface (F6) | |
| <input type="checkbox"/> Depleted Dark Surface (F7) | |
| <input type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136) | |
| <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) | |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) | |
| <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) | |

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

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

Remarks:



Photo 1
Wetland data point whie003e_w facing southeast



Photo 2
Wetland data point whie003e_w facing northeast

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline City/County: Highland County Sampling Date: 11/17/2015
 Applicant/Owner: Dominion State: VA Sampling Point: whie003_u
 Investigator(s): CG, AS Section, Township, Range: No PLSS in this area
 Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): concave Slope (%): 2
 Subregion (LRR or MLRA): S Lat: 38.33751695 Long: -79.50259049 Datum: WGS 1984
 Soil Map Unit Name: Nicelytown silt loam, 3 to 8 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 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

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

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

Sampling Point: whie003_u

| | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|---------------------|----------------------|---------------------|--|
| Tree Stratum (Plot size: <u>30</u>) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| $\frac{0}{\quad} = \text{Total Cover}$ 50% of total cover: <u>0</u> 20% of total cover: <u>0</u> | | | | |
| Sapling/Shrub Stratum (Plot size: <u>15</u>) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| $\frac{0}{\quad} = \text{Total Cover}$ 50% of total cover: <u>0</u> 20% of total cover: <u>0</u> | | | | |
| Herb Stratum (Plot size: <u>5</u>) | | | | |
| 1. <i>Trifolium repens</i> | 40 | Yes | FACU | |
| 2. <i>Dichanthelium clandestinum</i> | 40 | Yes | FAC | |
| 3. <i>Setaria pumila</i> | 30 | Yes | FAC | |
| 4. <i>Trifolium pratense</i> | 15 | No | FACU | |
| 5. <i>Juncus tenuis</i> | 2 | No | FAC | |
| 6. _____ | _____ | _____ | _____ | |
| 7. _____ | _____ | _____ | _____ | |
| 8. _____ | _____ | _____ | _____ | |
| 9. _____ | _____ | _____ | _____ | |
| 10. _____ | _____ | _____ | _____ | |
| 11. _____ | _____ | _____ | _____ | |
| $\frac{127}{\quad} = \text{Total Cover}$ 50% of total cover: <u>63.5</u> 20% of total cover: <u>25.4</u> | | | | |
| Woody Vine Stratum (Plot size: <u>30</u>) | | | | |
| 1. _____ | _____ | _____ | _____ | |
| 2. _____ | _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | _____ | |
| $\frac{0}{\quad} = \text{Total Cover}$ 50% of total cover: <u>0</u> 20% of total cover: <u>0</u> | | | | |
| Remarks: (Include photo numbers here or on a separate sheet.) | | | | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.66666666 (A/B)

Prevalence Index worksheet:

| | |
|-------------------------------|------------------|
| 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>72</u> | x 3 = <u>216</u> |
| FACU species <u>55</u> | x 4 = <u>220</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>127</u> (A) | <u>436</u> (B) |

Prevalence Index = B/A = 3.43

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators 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 or equal to 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: whie003_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 ¹ | Loc ² | | |
| 0-14 | 2.5Y 5/2 | 90 | 2.5YR 3/6 | 10 | C | PL/M | CL | |
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¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| | | | |
|---|---|--|--|
| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils³: | |
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) | |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) | <input type="checkbox"/> Coast Prairie Redox (A16) | |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> (MLRA 147, 148) | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) | |
| <input type="checkbox"/> Stratified Layers (A5) | <input checked="" type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> (MLRA 136, 147) | |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Other (Explain in Remarks) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136) | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) | | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) | | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147) | | |

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

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

Remarks:



Photo 1
Upland data point whie003_u facing south



Photo 2
Upland data point whie003_u facing north