WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: SERP City/County: NOTTOWAY Sampling Date: 08/28/2014
Applicant/Owner: DOMINION State: VA Sampling Point: WN-WD215_W
Investigator(s): J. SWEITZER Section, Township, Range: NA
Landform (hillslope, terrace, etc.): TOE-OF-SLOPE Local relief (concave, convex, none): NONE Slope (%): ~~NADI4~~ 3-5%
Subregion (LRR or MLRA): LRRP Lat: 37.28186843 Long: 78.23091667 Datum: NAD1983
Soil Map Unit Name: APPLING COARSE SANDY LOAM, UNDULATING PHASE 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 ✓ No ____	Is the Sampled Area within a Wetland?	Yes ✓ No ____
Hydric Soil Present?	Yes ✓ No ____		
Wetland Hydrology Present?	Yes ✓ No ____		

Remarks: POINT ESTABLISHED IN NARROW SWALE AT TOE-OF-CONVERGING SLOPES. ALL 3 CRITERIA MET.

PHOTOS: 100-0236 TO 0240

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ✓ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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)
- ___ Stunted or Stressed Plants (D1)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No ✓	Depth (inches): NA
Water Table Present?	Yes ____	No ✓	Depth (inches): NA
Saturation Present? (includes capillary fringe)	Yes ____	No ✓	Depth (inches): NA

Wetland Hydrology Present? Yes ✓ No ____

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

NA

Remarks: SEVERAL PRIMARY AND SECONDARY INDICATORS OF HYDROLOGY PRESENT

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: WNDKUZ15_W

Tree Stratum (Plot size: 10'R)	Absolute % Cover	Dominant Species?	Indicator Status
1. NA			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover: ____	20% of total cover: ____		
Sapling Stratum (Plot size: 10'R)			
1. LIQUIDAMBAR STYRACIFLUA	5	Y	FAC
2.			
3.			
4.			
5.			
6.			
	5 = Total Cover		
50% of total cover: —	20% of total cover: —		
Shrub Stratum (Plot size: 10'R)			
1. MAGNOLIA VIRGINIANA	15	Y	FACW
2. LIQUIDAMBAR STYRACIFLUA	10	Y	FAC
3. DIOSPYROS VIRGINIANA	10	Y	FAC
4. CORNUS AMOMUM	10	Y	FACW
5. SAMBUCUS NIGRA	5	N	FACW
6.			
	50 = Total Cover		
50% of total cover: 25	20% of total cover: 10		
Herb Stratum (Plot size: 10'R)			
1. ~~NA~~			
2. RUBUS ARGUTUS	5	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	5 = Total Cover		
50% of total cover: —	20% of total cover: —		
Woody Vine Stratum (Plot size: 10'R)			
1. SMILAX ROTUNDIFOLIA	80	Y	FAC
2. LONICERA JAPONICA	40	Y	FAC
3. ~~RUBUS ARGUTUS~~			
4. PARTHENOCISSUS QUINQUEFOLIA	15	N	FAC
5.			
	135 = Total Cover		
50% of total cover: 68	20% of total cover: 27		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 8 (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[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ✓ No ____

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

VEGETATION PASSES DOMINANCE TEST.

SOIL

Sampling Point: WNOK0215_W

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/2	50	7.5YR 3/4	50	C	M	SILT LOAM	
4-9	10YR 5/1	95	7.5YR 4/6	10	C	PL	COARSE SANDY LOAM	
9-18	10YR 5/1	50	10YR 6/1	45	D	M	COARSE SANDY LOAM	
9-18	—	—	7.5YR 4/6	5	C	PL	COARSE SANDY LOAM	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

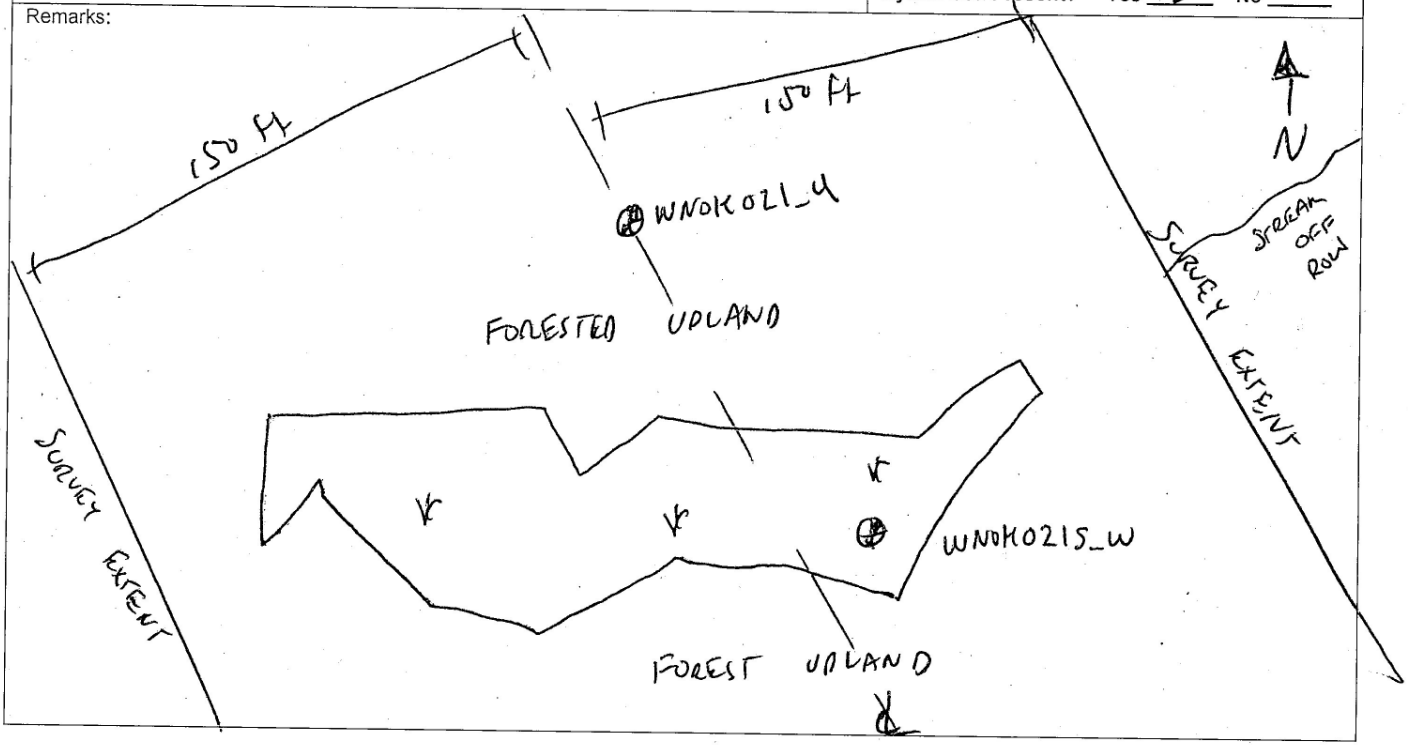
Restrictive Layer (if observed):

Type: NA

Depth (inches): NA

Hydric Soil Present? Yes ✓ No ___

Remarks:



Wetland data point wnok021s_w facing North

Wetland data point wnok021s_w facing South

Wetland data point wnok021s_w soil sample

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: SERP City/County: NOTTOWAY Sampling Date: 09/25/2014
Applicant/Owner: DOMINION State: VA Sampling Point: WWW021_U
Investigator(s): J. SWEITZER Section, Township, Range: NA
Landform (hillslope, terrace, etc.): HILLSLOPE Local relief (concave, convex, none): NONE Slope (%): 5-10%
Subregion (LRR or MLRA): LRR P Lat: 37.281994123 Long: 78.231053117 Datum: NAD1983
Soil Map Unit Name: APPLING COARSE SANDY LOAM, UNDULATING PHASE 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 ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ____	No ✓	

Remarks: POINT ESTABLISHED ON HILLSLOPE IN MIXED FOREST

PHOTO 100-00241 TO 0245

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No ✓ Depth (inches): NA
Water Table Present? Yes ____ No ✓ Depth (inches): NA
Saturation Present? (includes capillary fringe) Yes ____ No ✓ Depth (inches): NA

Wetland Hydrology Present? Yes ____ No ✓

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

NA

Remarks: NO INDICATORS OF WETLAND HYDROLOGY

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: WNWK021_U

Tree Stratum (Plot size: 30'R)	Absolute % Cover	Dominant Species?	Indicator Status
1. LIRIODENDRON TULIPIFERA	40	Y	FACU
2. QUERCUS ALBA	30	Y	FACU
3. PINUS TAEDA	20	N	FAC
4. LIQUIDAMBAR STYRACIFLUA	20	N	FAC
5. QUERCUS RUBRA	20	N	FACU
6.			
	130 = Total Cover		
50% of total cover: 65	20% of total cover: 26		
Sapling Stratum (Plot size: 15'R)			
1. LIQUID AMBAR STYRACIFLUA	50	Y	FAC
2. CARYA CORDIFORMIS	20	Y	FACU
3. QUERCUS RUBRA	10	N	FACU
4. CORNUS FLORIDA	10	N	FACU
5.			
6.			
	90 = Total Cover		
50% of total cover: 45	20% of total cover: 18		
Shrub Stratum (Plot size: 15'R)			
1. LIQUIDAMBAR STYRACIFLUA	30	Y	FAC
2. CARYA CORDIFORMIS	10	N	FACU
3. LIRIODENDRON TULIPIFERA	5	N	FACU
4. PINUS TAEDA	5	N	FAC
5. QUERCUS ALBA	5	N	FACU
6.			
	55 = Total Cover		
50% of total cover: 28	20% of total cover: 11		
Herb Stratum (Plot size: 5'R)			
1. VACCINIUM CORYMBOSUM	5	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	5 = Total Cover		
50% of total cover: —	20% of total cover: —		
Woody Vine Stratum (Plot size: 30'R)			
1. LONICERA JAPONICA	10	Y	FAC
2. SMILAX ROTUNDIFOLIA	5	Y	FAC
3.			
4.			
5.			
	15 = Total Cover		
50% of total cover: 8	20% of total cover: 3		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (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[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ___ No ✓

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

VEGETATION FAILS DOMINANCE TEST

Sampling Point: WNOH021_U

SOIL

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-3	10 YR 4/2	100	—	—	—	—	SANDY LOAM	
3-18	10 YR 6/6	100	—	—	—	—	LOAMY SAND	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: NA

Depth (inches): NA

Hydric Soil Present? Yes _____ No ✓

Remarks:

SEE SKETCH ON WNOH021S_W DATA FORM

Upland data point wnok021_u facing North

Upland data point wnok021_u facing South

Upland data point wnok021_u soil sample

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: SELP City/County: NOTTOWAY Sampling Date: 08/28/2014
Applicant/Owner: DOMINION State: VA Sampling Point: WDMO22F_W
Investigator(s): J. SWEITZER Section, Township, Range: NA
Landform (hillslope, terrace, etc.): CONV. SLOPES Local relief (concave, convex, none): NA Slope (%): 3-5
Subregion (LRR or MLRA): LRR P Lat: 37.280482445 Long: 78.229576055 Datum: NAD 1983
Soil Map Unit Name: LOVESGROVE SANDY LOAM, ERODED ROLLING PHASE 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 ✓ No ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓ No ____	
Wetland Hydrology Present?	Yes ✓ No ____	

Remarks: POINT ESTABLISHED IN WETLAND ASSOCIATED WITH AN EPHEMERAL STREAM. ALL 3 CRITERIA MET.

PHOTOS 100-0247 TO 0251

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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)
- ___ Stunted or Stressed Plants (D1)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No ✓ Depth (inches): NA
Water Table Present? Yes ____ No ✓ Depth (inches): NA
Saturation Present? (includes capillary fringe) Yes ✓ No ~~✓~~ Depth (inches): ~~NA~~ 08

Wetland Hydrology Present? Yes ✓ No ____

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

Remarks:
HYDROLOGY CRITERIA MET

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: WNOK0226-W

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 20'R)			
1. ACER RUBRUM	60	Y	FAC
2. ULMUS RUBRA	30	Y	FAC
3. LIQUID AMBAR STYRACIFLUA	10	N	FACW
4. LIRIODENDRON TULIPIFERA	10	N	FACW
5.			
6.			
	110 = Total Cover		
50% of total cover: 55	20% of total cover: 22		
Sapling Stratum (Plot size: 15'R)			
1. NYSSA SYLVATICA	5	Y	FAC
2. ACER RUBRUM	5	Y	FAC
3.			
4.			
5.			
6.			
	10 = Total Cover		
50% of total cover: 5	20% of total cover: 2		
Shrub Stratum (Plot size: 15'R)			
1. LIQUID AMBAR STYRACIFLUA	10	Y	FAC
2. CINDERA BENZOIN	10	Y	FAC
3. RUBUS ARUTUS	5	Y	FAC
4.			
5.			
6.			
	25 = Total Cover		
50% of total cover: 13	20% of total cover: 5		
Herb Stratum (Plot size: 5'R)			
1. CAREX INTUMESCENS	50	Y	FACW
2. MICROSTEGIUM VIMINEUM	20	Y	FAC
3. ATHYRIUM ASPLENIOIDES	20	Y	FAC
4. LEERSIA ORYZOIDES	10	N	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Woody Vine Stratum (Plot size: 20'R)			
1. NA			
2.			
3.			
4.			
5.			
	= Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 10 (A)

Total Number of Dominant Species Across All Strata: 10 (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[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ✓ No ___

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

VEGETATION PASSES DOMINANCE TEST

SOIL

Sampling Point: WNOH0222_W

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/1	80	—	—	—	—	SILT LOAM	
	10 YR 3/2	20	—	—	—	—	ORGANIC MATERIAL	
4-20	10 YR 5/1	95	10 YR 6/1	5	D	M	SANDY LOAM	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

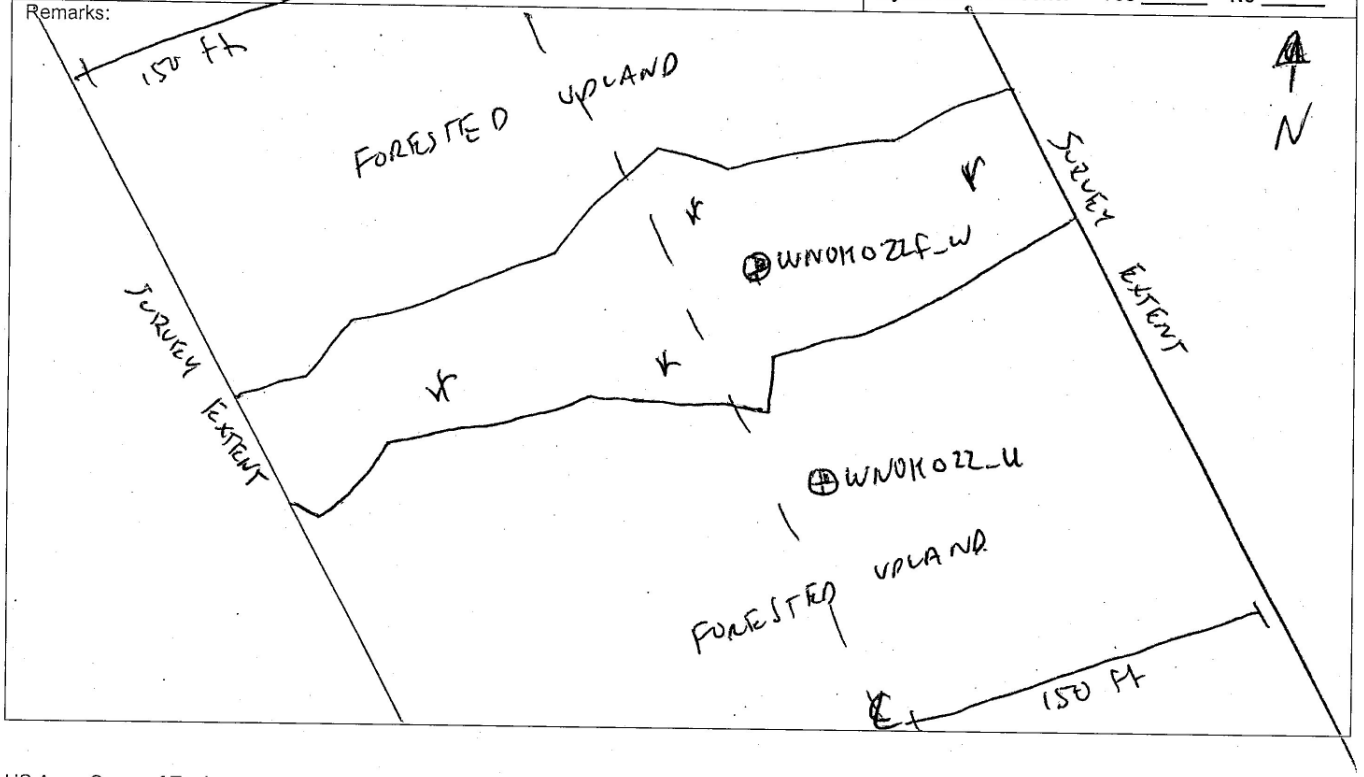
Restrictive Layer (if observed):

Type: NA

Depth (inches): NA

Hydric Soil Present? Yes ✓ No ___

Remarks:



Wetland data point wnok022f_w facing North

Wetland data point wnok022f_w facing South

Wetland data point wnok022f_w soil sample

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: SERP City/County: NOTTOWAY Sampling Date: 09/28/2014
Applicant/Owner: DOMINION State: VA Sampling Point: UNOH022-4
Investigator(s): J. SWEITZER Section, Township, Range: NA
Landform (hillslope, terrace, etc.): HILLSLOPE Local relief (concave, convex, none): NONE Slope (%): 5-10
Subregion (LRR or MLRA): LRR P Lat: 37, 280322271 Long: 78, 229477820 Datum: NAD1983
Soil Map Unit Name: MIXED ALLUVIAL LAND (Ma) 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 ____	No ✓	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ____	No ✓	

Remarks: POINT ESTABLISHED ON HILLSLOPE GRADING TO WETLAND, NO CRITERIA MET.

PHOTOS: 100-0252 TO 0256

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No ✓ Depth (inches): NA
Water Table Present? Yes ____ No ✓ Depth (inches): NA
Saturation Present? (includes capillary fringe) Yes ____ No ✓ Depth (inches): NA

Wetland Hydrology Present? Yes ____ No ✓

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

Remarks: NO HYDROLOGY INDICATORS PRESENT.

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: WNWHO 22_U

Tree Stratum (Plot size: 30'R)	Absolute % Cover	Dominant Species?	Indicator Status
1. LIRIODENDRON TULIPIFERA	50	Y	FACW
2. PINUS TAEDA	50	Y	FAC
3. ~~ACER RUBRUM~~ QUERCUS RUBRA	20	N	FACU
4. LIQUID AMBAR STYRACIFLUA	20	N	FAC
5.			
6.			
	140	= Total Cover	
50% of total cover: 70	20% of total cover: 28		
Sapling Stratum (Plot size: 15'R)			
1. LIRIODENDRON TULIPIFERA	20	Y	FACW
2. CARYA GLABRIFORMIS	20	Y	FACW
3. QUERCUS ALBA	10	N	FACU
4. LIQUIDAMBAR STYRACIFLUA	10	N	FAC
5.			
6.			
	60	= Total Cover	
50% of total cover: 30	20% of total cover: 12		
Shrub Stratum (Plot size: 15'R)			
1. NA			
2.			
3.			
4.			
5.			
6.			
		= Total Cover	
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5'R)			
1. NA			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
		= Total Cover	
50% of total cover:	20% of total cover:		
Woody Vine Stratum (Plot size: 30'R)			
1. LONICERA JAPONICA	20	Y	FAC
2.			
3.			
4.			
5.			
	20	= Total Cover	
50% of total cover: –	20% of total cover: –		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (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[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ___ No ✓

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

VEGETATION FAILS DOMINANCE TEST

SOIL

Sampling Point: WNDH022_U

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-7	10YR 3/1	100	—	—	—	—	FINE SANDY LOAM	
7-16	10YR 6/6	100	—	—	—	—	FINE SANDY LOAM	w/gravel
16-	AUGER REFUSAL							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: [redacted] 16

Depth (inches): [redacted] ROCK

Hydric Soil Present? Yes ____ No ✓

Remarks:

HYDRIC SOIL CRITERIA NOT MET

SEE WNDH022_U DATA FORM FOR SKETCH

Upland data point wnok022_u facing Northwest

Upland data point wnok022_u facing Southeast

Upland data point wnok022_u soil sample

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Southeast Reliability Project City/County: NA/Nottoway Sampling Date: 07/24/14
Applicant/Owner: Dominion State: VA Sampling Point: wnok001f_w
Investigator(s): W. Medlin, J. Sweitzer Section, Township, Range: NA
Landform (hillslope, terrace, etc.): seepage slope Local relief (concave, convex, none): concave Slope (%): 2-4
Subregion (LRR or MLRA): LRR P Lat: 37.273847 Long: -78.220592 Datum: NAD 1983
Soil Map Unit Name: Appling angular cobbly sandy loam, rolling phase NWI classification: PFO1B
Are climatic / hydrologic conditions on the site typical for this time of year? Yes [✓] No [ ] (If no, explain in Remarks.)
Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes [✓] No [ ]
Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes [✓]	No [ ]	**Is the Sampled Area within a Wetland?** Yes [✓] No [ ]
Hydric Soil Present?	Yes [✓]	No [ ]	
Wetland Hydrology Present?	Yes [✓]	No [ ]	

Remarks:
This area is a forested seepage slope located on the edge of a recent clear-cut area. Groundwater appears to be located near the surface and several small pools observed. This area has been planted with pines (~20 years old). All three criteria met. Area is a wetland.
*Photos 100-0224 to 0228

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)
- [✓] Surface Water (A1)
- [✓] High Water Table (A2)
- [✓] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] True Aquatic Plants (B14)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres on Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)
- [ ] 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)
- [ ] Stunted or Stressed Plants (D1)
- [ ] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] Microtopographic Relief (D4)
- [ ] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes [✓]	No [ ]	Depth (inches): 0-1
Water Table Present?	Yes [✓]	No [ ]	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes [✓]	No [ ]	Depth (inches): 0

Wetland Hydrology Present? Yes [✓] No [ ]

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

Remarks:
Hydrology criteria met.

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: wnok001f_w

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus taeda	40	Y	FAC
2. Liriodendron tulipifera	50	Y	FACU
3.			
4.			
5.			
6.			
	90 = Total Cover		
50% of total cover: 45	20% of total cover: 18		
Sapling Stratum (Plot size: 15 ft radius)			
1. Prunus serotina	15	Y	FACU
2. Liriodendron tulipifera	20	Y	FACU
3. Ulmus americana	15	Y	FACW
4. Pinus taeda	15	Y	FAC
5.			
6.			
	65 = Total Cover		
50% of total cover: 32.5	20% of total cover: 13		
Shrub Stratum (Plot size: 15 ft radius)			
1. Liquidambar styraciflua	40	Y	FAC
2. Ulmus americana	20		FACW
3. Sambucus canadensis	25	Y	FACU
4. Quercus marlandica	5		NI
5. Liriodendron tulipifera	15		
6.			
	105 = Total Cover		
50% of total cover: 52.5	20% of total cover: 21		
Herb Stratum (Plot size: 10 ft radius)			
1. Juncus coriaceus	5	Y	FACW
2. Cicuta maculata	15	Y	OBL
3. Carex lurida	5	Y	OBL
4. Platanthera clavellata	2		FACW
5. Fragaria virginiana	5	Y	FACU
6. Acer rubrum	5	Y	FAC
7.			
8.			
9.			
10.			
11.			
	37 = Total Cover		
50% of total cover: 18.5	20% of total cover: 7.4		
Woody Vine Stratum (Plot size: 15 ft radius)			
1. Campsis radicans	15	Y	FAC
2. Parthenocissus quinquefolia	20	Y	FACU
3.			
4.			
5.			
	35 = Total Cover		
50% of total cover: 17.5	20% of total cover: 7		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 15 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	42	x 2 =	84
FAC species	115	x 3 =	345
FACU species	135	x 4 =	540
UPL species	0	x 5 =	0
Column Totals:	312 (A)		989 (B)

Prevalence Index = B/A = 3.17

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☑ No ☐

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

Hydrophytic vegetation criteria met.

SOIL

Sampling Point: wnok001f_w

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 3/1	100					sandy	organic muck present
1-8	10YR 4/1	95	10YR 6/6	5	C	M	SL	SL - sandy loam
8-16	10YR 5/1	95	10YR 5/6	5	C	M	SL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ☐ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

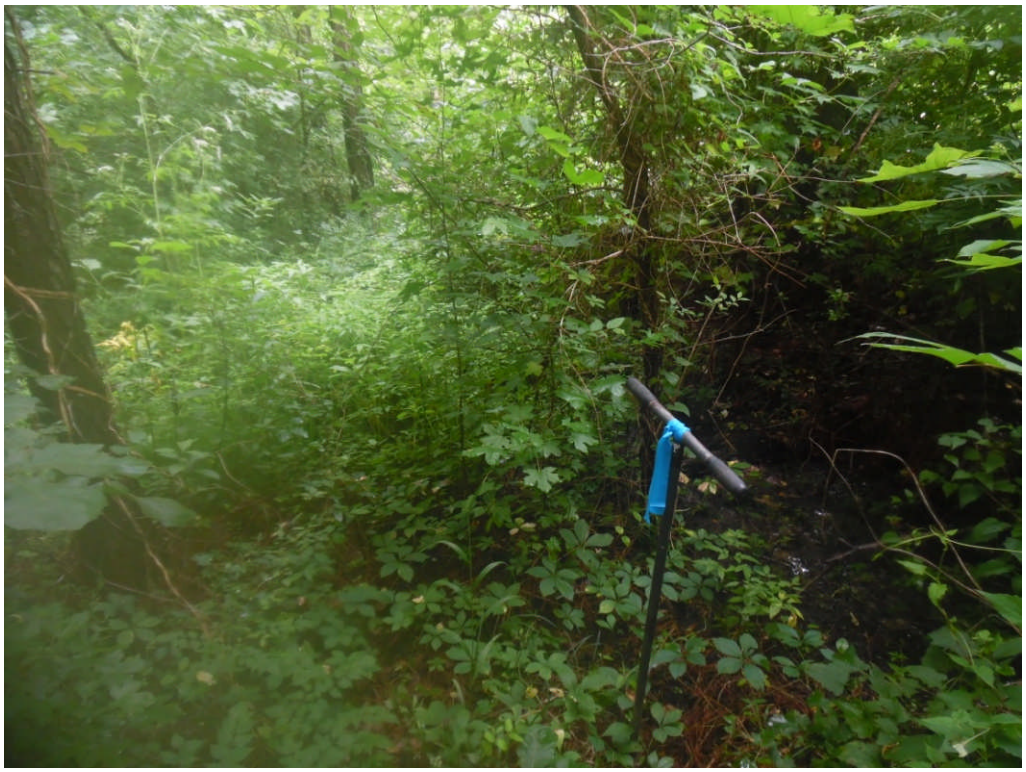
Type: NA

Depth (inches): NA

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Hydric soils criteria met. Below 16 inches soils are too waterlogged to pull a sample.



Wetland data point wnok001f_w facing Northwest

Wetland data point wnok001f_w facing West

Wetland data point wnok001f_w soil sample

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Dominion Southeast Reliability Project City/County: Nottaway Sampling Date: 07/24/2014

Applicant/Owner: Dominion Transmission State: VA Sampling Point: wnok001_u

Investigator(s): J. Sweitzer, W. Medlin Section, Township, Range: NA

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 5-10

Subregion (LRR or MLRA): LRR P Lat: 37.27380773 Long: 78.220486653 Datum: NAD 1983

Soil Map Unit Name: Appling angular cobbly sandy loam, rolling phase 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 ✓	No _____	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Photos 104-4586 soil, 4587 n, 4588 s (J. Sweitzer Camera)

Upland plot established on hillslope in mixed secondary growth forest.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No ✓	Depth (inches): _____
Water Table Present?	Yes _____	No ✓	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No ✓	Depth (inches): _____

Wetland Hydrology Present? **Yes** _____ **No** ✓

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

NA

Remarks:

No indicators of wetland hydrology.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: wnok001_u

Tree Stratum (Plot size: 30 ft R)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus taeda*	80	Y	FAC
2. *Liriodendron tulipifera*	20	N	FACU
3. *Liquidambar styraciflua*	10	N	FAC
4. *Juniperus virginiana*	5	N	FACU
5.			
6.			
7.			
	115 = Total Cover		
50% of total cover: 58	20% of total cover: 23		
Sapling/Shrub Stratum (Plot size: 15 ft R)			
1. *Liriodendron tulipifera*	40	Y	FACU
2. *Acer rubrum*	30	Y	FAC
3. *Liquidambar styraciflua*	20	N	FAC
4. *Ulmus rubra*	5	N	FAC
5. *Alnus incana*	10	N	FACU
6. *Ulmus alata*	10	N	FACU
7. *Prunus avium*	5	N	UPL
8.			
9.			
	120 = Total Cover		
50% of total cover: 60	20% of total cover: 24		
Herb Stratum (Plot size: 5 ft R)			
1. *Carex sp. (fruiting bodies absent)*	5	Y	NI
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	5 = Total Cover		
50% of total cover: 3	20% of total cover: 1		
Woody Vine Stratum (Plot size: 30 Ft R)			
1. *Campsis radicans*	10	Y	FAC
2. *Lonicera japonica*	10	Y	FAC
3. *Smilax bona-nox*	5	Y	FACU
4.			
5.			
	25 = Total Cover		
50% of total cover: 13	20% of total cover: 5		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (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[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 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 ___

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

Vegetation passes dominance test.

SOIL Sampling Point: wnok001_u

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	2.5Y 6/3	100	NA	NA	NA	NA	loamy Sand	w/gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: NA

Depth (inches): NA

Hydric Soil Present? **Yes** _____ **No** ✓

Remarks:

No indicators of hydric soils observed.

Upland data point wnok001_u facing North

Upland data point wnok001_u facing South

Upland data point wnok001_u soil sample

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Dominion Southeast Reliability Project City/County: Nottoway Sampling Date: 07/25/2014

Applicant/Owner: Dominion Transmission State: VA Sampling Point: wnok002f_w

Investigator(s): J. Sweitzer, W. Medlin Section, Township, Range: NA

Landform (hillslope, terrace, etc.): toe-of-slope Local relief (concave, convex, none): seep Slope (%): 0-5

Subregion (LRR or MLRA): LRR P Lat: 37.271335193 Long: 78.214036069 Datum: NAD 1983

Soil Map Unit Name: Enon-Vance-Helena soils, eroded rolling NWI classification: PFO1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** **Yes** ✓ **No** _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Photos 104-4589 soil, 4590 e, 4591 w (J. Sweitzer Camera)

Wetland point established in toe-of-slope/converging slopes wetland seep. Wetland also associated with stream SNOK002.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✓ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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)
- ___ Stunted or Stressed Plants (D1)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ✓	No _____	Depth (inches): 0-1
Water Table Present?	Yes ✓	No _____	Depth (inches): 10
Saturation Present? (includes capillary fringe)	Yes ✓	No _____	Depth (inches): 0

Wetland Hydrology Present? **Yes** ✓ **No** _____

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

NA

Remarks:

Several primary and secondary hydrology indicators observed. Hydrology criteria met.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: wnok002f_w

Tree Stratum (Plot size: 30 ft R)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	50	Y	FAC
2. *Liriodendron tulipifera*	30	Y	FACU
3. *Quercus velutina*	15	N	NL
4.			
5.			
6.			
7.			
	95 = Total Cover		
50% of total cover: 48	20% of total cover: 19		
Sapling/Shrub Stratum (Plot size: 15 ft R)			
1. *Liriodendron tulipifera*	10	Y	FACU
2. *Alnus serrulata*	5	Y	OBL
3. *Asimina triloba*	5	Y	FACU
4. *Carya glabra*	5	Y	FACU
5.			
6.			
7.			
8.			
9.			
	25 = Total Cover		
50% of total cover: 13	20% of total cover: 5		
Herb Stratum (Plot size: 5 ft R)			
1. *Eutrochium fistulosum*	15	Y	FACW
2. *Microstegium vimineum*	25	Y	FAC
3. *Persicaria pensylvanica*	5	N	FACW
4. *Impatiens capensis*	2	N	FACW
5. *Bidens sp.*	2	N	NI
6. *Lycopus americanus*	5	N	OBL
7.			
8.			
9.			
10.			
11.			
	54 = Total Cover		
50% of total cover: 27	20% of total cover: 11		
Woody Vine Stratum (Plot size: 30 Ft R)			
1. *Campsis radicans*	15	Y	FAC
2. *Smilax rotundifolia*	10	Y	FAC
3.			
4.			
5.			
	15 = Total Cover		
50% of total cover: 8	20% of total cover: 3		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (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[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 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 ___

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

Vegetation passes dominance test.

SOIL Sampling Point: wnok002f_w

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/1	75	7.5YR 4/6	25	C	PL	sandy Loam	
6-15	2.5Y 5/1	90	10YR 4/6	10	C	M	sandy Loam	
15-20	2.5Y 5/1	25	5YR 4/6	75	C	M	sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: NA

Depth (inches): NA

Hydric Soil Present? **Yes** ✓ **No** ___

Remarks:

One indicator of hydric soils met: Depleted matrix (F3).

Wetland data point wnok002f_w facing East

Wetland data point wnok002f_w facing West

Wetland data point wnok002f_w soil sample

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Dominion Southeast Reliability Project City/County: Nottoway Sampling Date: 07/25/2014

Applicant/Owner: Dominion Transmission State: VA Sampling Point: wnok002_u

Investigator(s): J. Sweitzer, W. Medlin Section, Township, Range: NA

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 5-10

Subregion (LRR or MLRA): LRR P Lat: 37.271233731 Long: 78.214053868 Datum: NAD 1983

Soil Map Unit Name: Helena fine sandy loam, eroded rolling phase 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 _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Photos 104-4593 soil, 4594 n, 4595 s (J. Sweitzer Camera)

Upland plot established on hillslope in deciduous forest.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No ✓	Depth (inches): _____
Water Table Present?	Yes _____	No ✓	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No ✓	Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

NA

Remarks:

No indicators of wetland hydrology.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: wnok002_u

Tree Stratum (Plot size: 30 ft R)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Nyssa sylvatica*	20	N	FAC
2. *Liriodendron tulipifera*	85	Y	FACU
3. *Liquidambar styraciflua*	10	N	FAC
4. *Quercus alba*	5	N	FACU
5. *Carya glabra*	5	N	FACU
6. *Acer rubrum*	15	N	FAC
7. *Ulmus rubra*	5	N	FAC
	145 = Total Cover		
50% of total cover: 73	20% of total cover: 29		
Sapling/Shrub Stratum (Plot size: 15 ft R)			
1. *Carya glabra*	5	N	FACU
2. *Carpinus caroliniana*	10	Y	FAC
3. *Quercus rubra*	10	Y	FACU
4. *Juniperus virginiana*	10	Y	FACU
5. *Asimina triloba*	15	Y	FAC
6. *Quercus alba*	10	Y	FACU
7.			
8.			
9.			
	60 = Total Cover		
50% of total cover: 30	20% of total cover: 12		
Herb Stratum (Plot size: 5 ft R)			
1. *Polystichum acrostichoides*	2	Y	FACU
2. *Dioscorea villosa*	2	Y	FAC
3. *Dichanthelium clandestinum*	2	Y	FAC
4. *Desmodium nudiflorum*	5	Y	NI
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	11 = Total Cover		
50% of total cover: 6	20% of total cover: 2		
Woody Vine Stratum (Plot size: 30 Ft R)			
1. *Campsis radicans*	5	Y	FAC
2.			
3.			
4.			
5.			
	5 = Total Cover		
50% of total cover:	20% of total cover:		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (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[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 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 ✓

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

Vegetation fails dominance test.

SOIL Sampling Point: wnok002_u

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/2	100	NA	NA	NA	NA	fine sandy loam	w/organic material
3-6	10YR 4/3	75	10YR 6/3	25	C	M	fine sandy loam	w/ organic material
6-18	10YR 5/3	40	NA	NA	NA	NA	fine sandy loam	w/gravel
	10YR 6/4	60	NA	NA	NA	NA	fine sandy loam	w/gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: NA

Depth (inches): NA

Hydric Soil Present? **Yes** _____ **No** ✓

Remarks:

No indicators of hydric soils observed.

Upland data point wnok002_u facing North

Upland data point wnok002_u facing South

Upland data point wnok002_u soil sample

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Dominion Southeast Reliability Project City/County: Nottoway Sampling Date: 07/26/2014

Applicant/Owner: Dominion Transmission State: VA Sampling Point: wnok004e_w

Investigator(s): J. Sweitzer, W. Medlin Section, Township, Range: NA

Landform (hillslope, terrace, etc.): ditch Local relief (concave, convex, none): none Slope (%): 0-5

Subregion (LRR or MLRA): LRR P Lat: 37.266592438 Long: 78.197822942 Datum: NAD 1983

Soil Map Unit Name: Wickham fine sandy loam NWI classification: PEM1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

Photos 100-0267 to 0270 (W. Medlin Camera)
This area is a small linear wetland feature (ditch) that appears to have been constructed to drain the adjacent silvicultural areas (loblolly pine plantation). All 3 criteria are met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ✓ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No ✓	Depth (inches): 0-1
Water Table Present?	Yes _____	No ✓	Depth (inches): 10
Saturation Present? (includes capillary fringe)	Yes ✓	No _____	Depth (inches): 0

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Several primary and secondary hydrology indicators observed. Hydrology criteria met.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: wnok004e_w

Tree Stratum (Plot size: 30 ft R)	Absolute % Cover	Dominant Species?	Indicator Status
1. NA			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft R)			
1. NA			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Herb Stratum (Plot size: 5 ft R)			
1. *Eutrochium fistulosum*	10	Y	FACW
2. *Juncus effusus*	10	Y	FACW
3. *Scirpus atrovirens*	10	Y	OBL
4. *Juncus coriaceus*	5	N	FACW
5. *Carex lurida*	10	Y	OBL
6. *Arisaema triphyllum*	2	N	FACW
7. *Dichanthelium clandestinum*	2	N	FAC
8. *Lycopus americanus*	2	N	OBL
9.			
10.			
11.			
	51 = Total Cover		
50% of total cover: 26	20% of total cover: 10		
Woody Vine Stratum (Plot size: 30 Ft R)			
1. *Lonicera japonica*	15	Y	FAC
2. *Parthenocissus quinquefolia*	10	Y	FAC
3.			
4.			
5.			
	25 = Total Cover		
50% of total cover: 13	20% of total cover: 5		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (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[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 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 ___

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

Vegetation passes dominance test.

SOIL

Sampling Point: wnok004e_w

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 4/2	85	7.5YR 4/6	15	C	PL	sandy Loam	
7-20	2.5Y 5/2	60	5YR 5/6	40	C	M	sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: NA

Depth (inches): NA

Hydric Soil Present? **Yes** ✓ **No** ___

Remarks:

One indicator of hydric soils met: Depleted matrix (F3).

Wetland data point wnok004e_w facing East

Wetland data point wnok004e_w facing West

Wetland data point wnok004e_w soil sample

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Dominion Southeast Reliability Project City/County: Nottoway Sampling Date: 07/26/2014

Applicant/Owner: Dominion Transmission State: VA Sampling Point: wnok004_u

Investigator(s): J. Sweitzer, W. Medlin Section, Township, Range: NA

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 0-5

Subregion (LRR or MLRA): LRR P Lat: 37.266494528 Long: 78.197800055 Datum: NAD 1983

Soil Map Unit Name: Wickham fine sandy loam NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Photos 104-4612 N, 4613 S, 4614 E, 4615 W, 4616 soils (J. Sweitzer Camera)

Upland plot established hillslope in Pinus taeda plantation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No ✓	Depth (inches): _____
Water Table Present?	Yes _____	No ✓	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No ✓	Depth (inches): _____

Wetland Hydrology Present? **Yes** _____ **No** ✓

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

NA

Remarks:

No indicators of wetland hydrology.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: wnok004_u

Tree Stratum (Plot size: 30 ft R)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus taeda*	60	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	60 = Total Cover		
50% of total cover: 30	20% of total cover: 12		
Sapling/Shrub Stratum (Plot size: 15 ft R)			
1. *Pinus taeda*	80	Y	FAC
2. *Juniperus virginiana*	15	N	FACU
3. *Rubus argutus*	15	N	FACU
4. *Liriodendron tulipifera*	5	N	FACU
5.			
6.			
7.			
8.			
9.			
	115 = Total Cover		
50% of total cover: 58	20% of total cover: 23		
Herb Stratum (Plot size: 5 ft R)			
1. *Asplenium platyneurons*	5	N	FACU
2. *Desmodium nudiflorum*	5	N	NL
3. *Dichanthelium clandestinum*	10	Y	FAC
4. *Rudbeckia hirta*	2	N	FACU
5. *Viola sp.*	5	N	NI
6. *Andropogon virginicus*	15	Y	FACU
7.			
8.			
9.			
10.			
11.			
	80 = Total Cover		
50% of total cover: 40	20% of total cover: 16		
Woody Vine Stratum (Plot size: 30 Ft R)			
1. *Campsis radicans*	10	Y	FAC
2. *Vitis aestivalis*	25	Y	FACU
3. *Parthenocissus quinquefolia*	10	Y	FACU
4.			
5.			
	45 = Total Cover		
50% of total cover: 23	20% of total cover: 9		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 57 (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[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 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 ___

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

Vegetation passes dominance test.

SOIL Sampling Point: wnok004_u

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-3	10 YR 3/2	50	NA	NA	NA	NA	SL	Fine sandy loam
	10YR 4/4	50	NA	NA	NA	NA	SL	mixed matrix with organic material
3-18	10YR 4/4	80	NA	NA	NA	NA	SL	some gravel
	2.5Y 7/4	20	NA	NA	NA	NA	loamy Sand	some gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: NA

Depth (inches): NA

Hydric Soil Present? **Yes** _____ **No** ✓

Remarks:

No indicators of hydric soils observed.

Upland data point wnok004_u facing North

Upland data point wnok004_u facing South

Upland data point wnok004_u soil sample

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Dominion Southeast Reliability Project City/County: Nottoway Sampling Date: 07/26/2014

Applicant/Owner: Dominion Transmission State: VA Sampling Point: wnok003e_w

Investigator(s): J. Sweitzer, W. Medlin Section, Township, Range: NA

Landform (hillslope, terrace, etc.): toe-of-slope and floodplain Local relief (concave, convex, none): none Slope (%): 0-5

Subregion (LRR or MLRA): LRR P Lat: 37.265567440 Long: 78.196272184 Datum: NAD 1983

Soil Map Unit Name: Mixed Alluvial Land (Mn) NWI classification: PEM1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** **Yes ✓ No _____**
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Photos 100-0250 N, 100-0251 E, 100-0252 S, 100-0253 W, 100-0254 soil (W. Medlin Camera)
Piedmont floodplain depression that floods frequently for long duration. Also, this area has been recently planted w/corn, and wetter areas are not allowing the corn to grow well. This wetland system continues into the forest portion of the floodplain associated with Ellis Creek.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ✓ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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)
- ✓ Stunted or Stressed Plants (D1)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ✓ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No ✓	Depth (inches): 0-1
Water Table Present?	Yes _____	No ✓	Depth (inches): 10
Saturation Present? (includes capillary fringe)	Yes _____	No ✓	Depth (inches): 0

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Several primary and secondary hydrology indicators observed. Hydrology criteria met.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: wnok003e_w

Tree Stratum (Plot size: 30 ft R)	Absolute % Cover	Dominant Species?	Indicator Status
1. NA			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft R)			
1. NA			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	25 = Total Cover		
50% of total cover: 13	20% of total cover: 5		
Herb Stratum (Plot size: 5 ft R)			
1. *Tridens flavis*	10	N	
2. *Juncus effusus*	5	N	
3. *Carex frankii*	15	Y	OBL
4. *Symphyotrichum pilosum*	15	Y	FAC
5. *Tragopogon dubius*	2	N	
6. *Ambrosia artemisifolia*	10	N	
7. *Cyperus strigosus*	2	N	
8. *Hypericum nudiflorum*	40	Y	FACW
9. *Rhexia sp*	2	N	
10. *Persicaria pensylvanica*	15	Y	FACW
11. *Ludwigia alterniflora*	2	N	
	120 = Total Cover		
50% of total cover: 60	20% of total cover: 24		
Woody Vine Stratum (Plot size: 30 Ft R)			
1. *Campsis radicans*	5	Y	FAC
2. *Ipomoea lacunosa*	5	Y	FACW
3.			
4.			
5.			
	10 = Total Cover		
50% of total cover: 5	20% of total cover: 2		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (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[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 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 ___

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

Vegetation passes dominance test.

SOIL

Sampling Point: wnok003e_w

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/1	75	7.5YR 4/6	25	C	PL	sandy Loam	
6-15	2.5Y 5/1	90	10YR 4/6	10	C	M	sandy Loam	
15-20	2.5Y 5/1	25	5YR 4/6	75	C	M	sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: NA

Depth (inches): NA

Hydric Soil Present? **Yes** ✓ **No** ___

Remarks:

One indicator of hydric soils met: Depleted matrix (F3).

Wetland data point wnok003e_w facing North

Wetland data point wnok003e_w facing South

Wetland data point wnok003e_w soil sample

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Dominion Southeast Reliability Project City/County: Nottoway Sampling Date: 07/26/2014

Applicant/Owner: Dominion Transmission State: VA Sampling Point: wnok003f_w

Investigator(s): J. Sweitzer, W. Medlin Section, Township, Range: NA

Landform (hillslope, terrace, etc.): toe-of-slope Local relief (concave, convex, none): seep Slope (%): 0-5

Subregion (LRR or MLRA): LRR P Lat: 37.265962792 Long: 78.196651125 Datum: NAD 1983

Soil Map Unit Name: Mixed Alluvial Land (Mn) NWI classification: PFO1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** **Yes** ✓ **No** _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Photos 100-0259 to 263 (N,E,S,W, Soils)

This area is a Piedmont floodplain depression forest w/multiple drainage patterns situated along Ellis Creek. All 3 criteria met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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)
- ___ Stunted or Stressed Plants (D1)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ✓ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ✓	No _____	Depth (inches): 0-1
Water Table Present?	Yes ✓	No _____	Depth (inches): 10
Saturation Present? (includes capillary fringe)	Yes ✓	No _____	Depth (inches): 0

Wetland Hydrology Present? **Yes** ✓ **No** _____

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

NA

Remarks:

Several primary and secondary hydrology indicators observed. Hydrology criteria met.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: wnok003f_w

Tree Stratum (Plot size: 30 ft R)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Betula nigra*	55	Y	FACW
2. *Ulmus americana*	50	Y	FACW
3. *Juglans nigra*	30	N	FACU
4. *Juniperus virginiana*	25	N	FACU
5.			
6.			
7.			
	160 = Total Cover		
50% of total cover: 80	20% of total cover: 32		
Sapling/Shrub Stratum (Plot size: 15 ft R)			
1. *Asimina triloba*	80	Y	FACU
2. *Carpinus caroliniana*	30	Y	FAC
3. *Acer negundo*	15	N	FAC
4.			
5.			
6.			
7.			
8.			
9.			
	125 = Total Cover		
50% of total cover: 63	20% of total cover: 25		
Herb Stratum (Plot size: 5 ft R)			
1. *Chasmanthium sessiliflorum*	30	Y	FAC
2. *Microstegium vimineum*	25	Y	FAC
3. *Lindera benzoin*	10	N	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	65 = Total Cover		
50% of total cover: 33	20% of total cover: 13		
Woody Vine Stratum (Plot size: 30 Ft R)			
1. *Vitis rotundifolia*	20	Y	FAC
2. *Smilax rotundifolia*	15	Y	FAC
3.			
4.			
5.			
	35 = Total Cover		
50% of total cover: 18	20% of total cover: 7		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (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[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 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 ___

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

Vegetation passes dominance test.

SOIL Sampling Point: wnok003f_w

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/1	100	NA	NA	NA	NA	silt Loam	some organic content
2-14	2.5Y 5/2	85	7.5YR 5/8	15	C	PL	silty clay L	NA
14-20	2.5Y 5/2	65	7.5YR 5/8	35	C	PL/M	clay Loam	NA

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: NA

Depth (inches): NA

Hydric Soil Present? **Yes** ✓ **No** ___

Remarks:

One indicator of hydric soils met: Depleted matrix (F3).

Wetland data point wnok003f_w facing North

Wetland data point wnok003f_w facing South

Wetland data point wnok003f_w soil sample

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Dominion Southeast Reliability Project City/County: Nottoway Sampling Date: 07/26/2014

Applicant/Owner: Dominion Transmission State: VA Sampling Point: wnok003_u

Investigator(s): J. Sweitzer, W. Medlin Section, Township, Range: NA

Landform (hillslope, terrace, etc.): floodplain terrace Local relief (concave, convex, none): none Slope (%): 0-5

Subregion (LRR or MLRA): LRR P Lat: 37.265843993 Long: 78.196838796 Datum: NAD 1983

Soil Map Unit Name: Mixed Alluvial Land (Mn) 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 ✓	No _____	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Photos 104-4599 soil, 4599 n, 4600 s (J. Sweitzer Camera)

Upland plot established on floodplain terrace in broadleaf deciduous forest.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No ✓	Depth (inches): _____
Water Table Present?	Yes _____	No ✓	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No ✓	Depth (inches): _____

Wetland Hydrology Present? **Yes** _____ **No** ✓

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

NA

Remarks:

No indicators of wetland hydrology.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: wnok003_u

Tree Stratum (Plot size: 30 ft R)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Juglans nigra*	10	N	FAC
2. *Liriodendron tulipifera*	20	N	FACU
3. *Juniperus virginiana*	10	N	FACU
4. *Quercus alba*	10	N	FACU
5. *Celtis occidentalis*	30	Y	FACU
6. *Platanus occidentalis*	30	Y	FACW
7. *Quercus rubra*	10	N	FACU
	120 = Total Cover		
50% of total cover: 60	20% of total cover: 24		

Sapling/Shrub Stratum (Plot size: 15 ft R)			
1. *Asimina triloba*	40	Y	FAC
2. *Ulmus rubra*	10	N	FAC
3. *Cercis canadensis*	10	N	FACU
4. *Lindera benzoin*	60	Y	FAC
5.			
6.			
7.			
8.			
9.			
	120 = Total Cover		
50% of total cover: 60	20% of total cover: 24		

Herb Stratum (Plot size: 5 ft R)			
1. *Microstegium vimineum*	70	Y	FAC
2. *Carex sp. (no fruiting bodies)*	10	N	NI
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	80 = Total Cover		
50% of total cover: 40	20% of total cover: 16		

Woody Vine Stratum (Plot size: 30 Ft R)			
1. *Parthenocissus quinquefolia*	10	Y	FACU
2. *Vitis rotundifolia*	5	Y	FAC
3.			
4.			
5.			
	15 = Total Cover		
50% of total cover: 8	20% of total cover: 3		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (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[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 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 ___

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

Vegetation passes dominance test. Typical well drained piedmont floodplain vegetation.

SOIL Sampling Point: wnok003_u

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/4	50	NA	NA	NA	NA	sandy Loam	
	10YR 4/3	50	NA	NA	NA	NA	sandy Loam	
5-16	10YR 4/4	100	NA	NA	NA	NA	loamy Sand	
16-18+	2.5Y 7/2	90	10YR 5/6	10	C	M	loamy Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: NA

Depth (inches): NA

Hydric Soil Present? **Yes** _____ **No** ✓

Remarks:

No indicators of hydric soils observed.

Upland data point wnok003_u facing North

Upland data point wnok003_u facing South

Upland data point wnok003_u soil sample

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Dominion Southeast Reliability Project City/County: Nottoway Sampling Date: 07/26/2014

Applicant/Owner: Dominion Transmission State: VA Sampling Point: wnok003e_w

Investigator(s): J. Sweitzer, W. Medlin Section, Township, Range: NA

Landform (hillslope, terrace, etc.): toe-of-slope and floodplain Local relief (concave, convex, none): none Slope (%): 0-5

Subregion (LRR or MLRA): LRR P Lat: 37.265567440 Long: 78.196272184 Datum: NAD 1983

Soil Map Unit Name: Mixed Alluvial Land (Mn) NWI classification: PEM1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** **Yes ✓ No _____**
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Photos 100-0250 N, 100-0251 E, 100-0252 S, 100-0253 W, 100-0254 soil (W. Medlin Camera)
Piedmont floodplain depression that floods frequently for long duration. Also, this area has been recently planted w/corn, and wetter areas are not allowing the corn to grow well. This wetland system continues into the forest portion of the floodplain associated with Ellis Creek.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ✓ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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)
- ✓ Stunted or Stressed Plants (D1)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ✓ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No ✓	Depth (inches): 0-1
Water Table Present?	Yes _____	No ✓	Depth (inches): 10
Saturation Present? (includes capillary fringe)	Yes _____	No ✓	Depth (inches): 0

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Several primary and secondary hydrology indicators observed. Hydrology criteria met.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: wnok003e_w

Tree Stratum (Plot size: 30 ft R)	Absolute % Cover	Dominant Species?	Indicator Status
1. NA			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft R)			
1. NA			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	25 = Total Cover		
50% of total cover: 13	20% of total cover: 5		
Herb Stratum (Plot size: 5 ft R)			
1. *Tridens flavis*	10	N	
2. *Juncus effusus*	5	N	
3. *Carex frankii*	15	Y	OBL
4. *Symphyotrichum pilosum*	15	Y	FAC
5. *Tragopogon dubius*	2	N	
6. *Ambrosia artemisifolia*	10	N	
7. *Cyperus strigosus*	2	N	
8. *Hypericum nudiflorum*	40	Y	FACW
9. *Rhexia sp*	2	N	
10. *Persicaria pensylvanica*	15	Y	FACW
11. *Ludwigia alterniflora*	2	N	
	120 = Total Cover		
50% of total cover: 60	20% of total cover: 24		
Woody Vine Stratum (Plot size: 30 Ft R)			
1. *Campsis radicans*	5	Y	FAC
2. *Ipomoea lacunosa*	5	Y	FACW
3.			
4.			
5.			
	10 = Total Cover		
50% of total cover: 5	20% of total cover: 2		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (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[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 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 ___

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

Vegetation passes dominance test.

SOIL

Sampling Point: wnok003e_w

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/1	75	7.5YR 4/6	25	C	PL	sandy Loam	
6-15	2.5Y 5/1	90	10YR 4/6	10	C	M	sandy Loam	
15-20	2.5Y 5/1	25	5YR 4/6	75	C	M	sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: NA

Depth (inches): NA

Hydric Soil Present? **Yes** ✓ **No** ___

Remarks:

One indicator of hydric soils met: Depleted matrix (F3).

Wetland data point wnok003e_w facing North

Wetland data point wnok003e_w facing South

Wetland data point wnok003e_w soil sample

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Dominion Southeast Reliability Project City/County: Nottoway Sampling Date: 07/26/2014

Applicant/Owner: Dominion Transmission State: VA Sampling Point: wnok003f_w

Investigator(s): J. Sweitzer, W. Medlin Section, Township, Range: NA

Landform (hillslope, terrace, etc.): toe-of-slope Local relief (concave, convex, none): seep Slope (%): 0-5

Subregion (LRR or MLRA): LRR P Lat: 37.265962792 Long: 78.196651125 Datum: NAD 1983

Soil Map Unit Name: Mixed Alluvial Land (Mn) NWI classification: PFO1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** **Yes** ✓ **No** _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Photos 100-0259 to 263 (N,E,S,W, Soils)

This area is a Piedmont floodplain depression forest w/multiple drainage patterns situated along Ellis Creek. All 3 criteria met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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)
- ___ Stunted or Stressed Plants (D1)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ✓ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ✓	No _____	Depth (inches): 0-1
Water Table Present?	Yes ✓	No _____	Depth (inches): 10
Saturation Present? (includes capillary fringe)	Yes ✓	No _____	Depth (inches): 0

Wetland Hydrology Present? **Yes** ✓ **No** _____

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

NA

Remarks:

Several primary and secondary hydrology indicators observed. Hydrology criteria met.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: wnok003f_w

Tree Stratum (Plot size: 30 ft R)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Betula nigra*	55	Y	FACW
2. *Ulmus americana*	50	Y	FACW
3. *Juglans nigra*	30	N	FACU
4. *Juniperus virginiana*	25	N	FACU
5.			
6.			
7.			
	160 = Total Cover		
50% of total cover: 80	20% of total cover: 32		
Sapling/Shrub Stratum (Plot size: 15 ft R)			
1. *Asimina triloba*	80	Y	FACU
2. *Carpinus caroliniana*	30	Y	FAC
3. *Acer negundo*	15	N	FAC
4.			
5.			
6.			
7.			
8.			
9.			
	125 = Total Cover		
50% of total cover: 63	20% of total cover: 25		
Herb Stratum (Plot size: 5 ft R)			
1. *Chasmanthium sessiliflorum*	30	Y	FAC
2. *Microstegium vimineum*	25	Y	FAC
3. *Lindera benzoin*	10	N	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	65 = Total Cover		
50% of total cover: 33	20% of total cover: 13		
Woody Vine Stratum (Plot size: 30 Ft R)			
1. *Vitis rotundifolia*	20	Y	FAC
2. *Smilax rotundifolia*	15	Y	FAC
3.			
4.			
5.			
	35 = Total Cover		
50% of total cover: 18	20% of total cover: 7		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (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[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 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 ___

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

Vegetation passes dominance test.

SOIL Sampling Point: wnok003f_w

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/1	100	NA	NA	NA	NA	silt Loam	some organic content
2-14	2.5Y 5/2	85	7.5YR 5/8	15	C	PL	silty clay L	NA
14-20	2.5Y 5/2	65	7.5YR 5/8	35	C	PL/M	clay Loam	NA

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: NA

Depth (inches): NA

Hydric Soil Present? **Yes** ✓ **No** ___

Remarks:

One indicator of hydric soils met: Depleted matrix (F3).

Wetland data point wnok003f_w facing North

Wetland data point wnok003f_w facing South

Wetland data point wnok003f_w soil sample

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Dominion Southeast Reliability Project City/County: Nottoway Sampling Date: 07/26/2014

Applicant/Owner: Dominion Transmission State: VA Sampling Point: wnok003_u

Investigator(s): J. Sweitzer, W. Medlin Section, Township, Range: NA

Landform (hillslope, terrace, etc.): floodplain terrace Local relief (concave, convex, none): none Slope (%): 0-5

Subregion (LRR or MLRA): LRR P Lat: 37.265843993 Long: 78.196838796 Datum: NAD 1983

Soil Map Unit Name: Mixed Alluvial Land (Mn) 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 ✓	No _____	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Photos 104-4599 soil, 4599 n, 4600 s (J. Sweitzer Camera)

Upland plot established on floodplain terrace in broadleaf deciduous forest.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No ✓	Depth (inches): _____
Water Table Present?	Yes _____	No ✓	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No ✓	Depth (inches): _____

Wetland Hydrology Present? **Yes** _____ **No** ✓

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

NA

Remarks:

No indicators of wetland hydrology.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: wnok003_u

Tree Stratum (Plot size: 30 ft R)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Juglans nigra*	10	N	FAC
2. *Liriodendron tulipifera*	20	N	FACU
3. *Juniperus virginiana*	10	N	FACU
4. *Quercus alba*	10	N	FACU
5. *Celtis occidentalis*	30	Y	FACU
6. *Platanus occidentalis*	30	Y	FACW
7. *Quercus rubra*	10	N	FACU
	120 = Total Cover		
50% of total cover: 60	20% of total cover: 24		

Sapling/Shrub Stratum (Plot size: 15 ft R)			
1. *Asimina triloba*	40	Y	FAC
2. *Ulmus rubra*	10	N	FAC
3. *Cercis canadensis*	10	N	FACU
4. *Lindera benzoin*	60	Y	FAC
5.			
6.			
7.			
8.			
9.			
	120 = Total Cover		
50% of total cover: 60	20% of total cover: 24		

Herb Stratum (Plot size: 5 ft R)			
1. *Microstegium vimineum*	70	Y	FAC
2. *Carex sp. (no fruiting bodies)*	10	N	NI
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	80 = Total Cover		
50% of total cover: 40	20% of total cover: 16		

Woody Vine Stratum (Plot size: 30 Ft R)			
1. *Parthenocissus quinquefolia*	10	Y	FACU
2. *Vitis rotundifolia*	5	Y	FAC
3.			
4.			
5.			
	15 = Total Cover		
50% of total cover: 8	20% of total cover: 3		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (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[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 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 ___

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

Vegetation passes dominance test. Typical well drained piedmont floodplain vegetation.

SOIL Sampling Point: wnok003_u

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/4	50	NA	NA	NA	NA	sandy Loam	
	10YR 4/3	50	NA	NA	NA	NA	sandy Loam	
5-16	10YR 4/4	100	NA	NA	NA	NA	loamy Sand	
16-18+	2.5Y 7/2	90	10YR 5/6	10	C	M	loamy Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: NA

Depth (inches): NA

Hydric Soil Present? **Yes** _____ **No** ✓

Remarks:

No indicators of hydric soils observed.

Upland data point wnok003_u facing North

Upland data point wnok003_u facing South

Upland data point wnok003_u soil sample

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Southeast Reliability Project City/County: Nottoway Sampling Date: 07/28/2014

Applicant/Owner: Dominion Transmission State: VA Sampling Point: wnok005f_w

Investigator(s): J. Sweitzer, W. Medlin Section, Township, Range: NA

Landform (hillslope, terrace, etc.): convergent slopes Local relief (concave, convex, none): none Slope (%): 0-5

Subregion (LRR or MLRA): LRR P Lat: 37.261839362 Long: 78.189293012 Datum: NAD 1983

Soil Map Unit Name: Mixed Alluvial Land (Mn) NWI classification: PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

Photos 104-4618 to 4622 (Soils N, S, E, W)

This wetland forms at the convergence of two slopes and is the headwaters of an intermittent stream (snok006). All 3 criteria met. Area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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)
- ___ Stunted or Stressed Plants (D1)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No ✓	Depth (inches): NA
Water Table Present?	Yes _____	No ✓	Depth (inches): NA
Saturation Present? (includes capillary fringe)	Yes _____	No ✓	Depth (inches): NA

Wetland Hydrology Present? Yes ✓ No _____

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

NA

Remarks:

Several primary and secondary hydrology indicators observed. Hydrology criteria met.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: wnok005f_w

Tree Stratum (Plot size: 30 ft R)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus taeda*	30	Y	FAC
2. *Acer rubrum*	20	Y	FAC
3. *Liquidambar styraciflua*	5	N	FAC
4. *Cercis canadensis*	5	N	FACU
5. *Liriodendron tulipifera*	10	N	FAC
6. *Platanus occidentalis*	10	N	FACW
7. *Fraxinus Pennsylvanica*	20	Y	FACW
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		
Sapling/Shrub Stratum (Plot size: 15 ft R)			
1. *Liquidambar styraciflua*	40	Y	FAC
2. *Cercis canadensis*	20	Y	FACU
3. *Acer rubrum*	20	Y	FAC
4. *Ulmus alata*	20	Y	FACU
5. *Viburnum prunifolium*	10	N	FACU
6.			
7.			
8.			
9.			
	110 = Total Cover		
50% of total cover: 55	20% of total cover: 22		
Herb Stratum (Plot size: 5 ft R)			
1. *Persicaria pensylvanica*	2	Y	FACW
2. *Polystichum acrostichoides*	2	Y	FACU
3. *Viola sp.*	2	Y	NI
4. *grass*	5	Y	NI
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	11 = Total Cover		
50% of total cover: 6	20% of total cover: 2		
Woody Vine Stratum (Plot size: 30 Ft R)			
1. *Vitis rotundifolia*	10	Y	FAC
2. *Campsis radicans*	20	Y	FAC
3. *Parthenocissus quinquefolia*	10	Y	FAC
4.			
5.			
	40 = Total Cover		
50% of total cover: 20	20% of total cover: 8		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 82 (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[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 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 ___

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

Vegetation passes dominance test.

SOIL Sampling Point: wnok005f_w

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 4/1	95	10YR 3/6	5	C	M/PL	silt Loam	NA
2-15	2.5Y 5/3	50	10YR 4/4	50	C	M/PL	sand Loam	NA
15-18	10YR 8/1	40	NA	NA	NA	NA	sand Loam	NA
	7.5YR 2/2	30	NA	NA	NA	NA	sand Loam	NA
	5YR 3/3	30	NA	NA	NA	NA	sand Loam	NA

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: NA

Depth (inches): NA

Hydric Soil Present? Yes ✓ **No** ___

Remarks:

One indicator of hydric soils met: Depleted matrix (F3).

Wetland data point wnok005f_w facing North

Wetland data point wnok005f_w facing South

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Southeast Reliability Project City/County: NA/Nottoway Sampling Date: 07/28/14
Applicant/Owner: Dominion State: VA Sampling Point: wnok005_u
Investigator(s): W. Medlin, J. Sweitzer Section, Township, Range: NA
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 5-10
Subregion (LRR or MLRA): LRR P Lat: 37.261693858 Long: -78.189325889 Datum: NAD 1983
Soil Map Unit Name: Mixed alluvial land (Mn) NWI classification: Upland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes [✓] No [ ] (If no, explain in Remarks.)
Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes [✓] No [ ]
Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes [ ]	No [✓]	**Is the Sampled Area within a Wetland?** Yes [ ] No [✓]
Hydric Soil Present?	Yes [ ]	No [✓]	
Wetland Hydrology Present?	Yes [ ]	No [✓]	

Remarks:
This area is an upland hillslope adjacent to a small headwater drainage. All three criteria not met. Area is not a wetland.

*Photos 100-0271 to 0275 (WLM camera)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] True Aquatic Plants (B14)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres on Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] 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)
- [ ] Stunted or Stressed Plants (D1)
- [ ] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] Microtopographic Relief (D4)
- [ ] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes [ ] No [✓] Depth (inches): _____
Water Table Present? Yes [ ] No [✓] Depth (inches): _____
Saturation Present? (includes capillary fringe) Yes [ ] No [✓] Depth (inches): _____

Wetland Hydrology Present? Yes [ ] No [✓]

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

Remarks:
Hydrology criteria is not met.

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: wnok005_u

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus taeda	60	Y	FAC
2.			
3.			
4.			
5.			
6.			
	60 = Total Cover		
50% of total cover: 30	20% of total cover: 12		
Sapling Stratum (Plot size: 15 ft radius)			
1. Liquidambar styraciflua	10		FAC
2. Cercis canadensis	30	Y	FACU
3. Quercus alba	15		FACU
4. Nyssa sylvatica	20	Y	FAC
5. Acer rubrum	5		FAC
6.			
	80 = Total Cover		
50% of total cover: 40	20% of total cover: 16		
Shrub Stratum (Plot size: 15 ft radius)			
1. Ulmus alata	20	Y	FACU
2. Cercis canadensis	40	Y	FACU
3.			
4.			
5.			
6.			
	60 = Total Cover		
50% of total cover: 30	20% of total cover: 12		
Herb Stratum (Plot size: 10 ft radius)			
1. Polystichum acrostichoides	45	Y	FACU
2. Euonymus americanus	5		FAC
3. Viola sororia	2		FAC
4. Botrypus virginianus	5		FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	57 = Total Cover		
50% of total cover: 28.5	20% of total cover: 11.4		
Woody Vine Stratum (Plot size: 15 ft radius)			
1. Campsis radicans	2		FAC
2. Lonicera japonica	15	Y	FAC
3.			
4.			
5.			
	17 = Total Cover		
50% of total cover: 8.5	20% of total cover: 3.4		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 43 (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[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☐ No ☑

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

Hydrophytic vegetation criteria is not met.

SOIL Sampling Point: wnok005_u

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/2	100					SL	SL - sandy loam
3-9	10YR 4/3	40					SCL	SCL - sandy clay loam; MM
	7.5YR 4/4	60					SCL	MM - mixed matrix
9-13	10YR 3/2	50					clay loam	mixed matrix
	7.5YR 4/4	50					clay loam	mixed matrix
13-20	7.5YR 5/4	30	7.5YR 5/8	70	C	M	clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ☐ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: NA

Depth (inches): NA

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Hydric soils criteria is not met.

Upland data point wnok005_u facing North

Upland data point wnok005_u facing South

Wetland data point wnok005f_w soil sample

Upland data point wnok005_u soil sample

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Southeast Reliability Project City/County: Nottoway Sampling Date: 07/28/2014

Applicant/Owner: Dominion Transmission State: VA Sampling Point: wnok006e_w

Investigator(s): J. Sweitzer, W. Medlin Section, Township, Range: NA

Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): none Slope (%): 0-5

Subregion (LRR or MLRA): LRR P Lat: 37.258973725 Long: 78.182612076 Datum: NAD 1983

Soil Map Unit Name: Mixed alluvial land (Mn) NWI classification: PEM1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** **Yes ✓ No _____**
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

Photos 104-4631 to 4635 (Soil, N, S, E, W)

Wetland located at toe of slope and in floodplain of flat creek. All 3 criteria are met. Area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ✓ Oxidized Rhizospheres on Living Roots (C3)
- ✓ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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)
- ___ Stunted or Stressed Plants (D1)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ✓ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____ No ✓	Depth (inches): NA
Water Table Present?	Yes _____ No ✓	Depth (inches): NA
Saturation Present? (includes capillary fringe)	Yes _____ No ✓	Depth (inches): NA

Wetland Hydrology Present? Yes ✓ No _____

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

NA

Remarks:

Several primary and secondary hydrology indicators observed. Hydrology criteria met.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: wnok006e_w

Tree Stratum (Plot size: 30 ft R)	Absolute % Cover	Dominant Species?	Indicator Status
1. *NA*			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Sapling/Shrub Stratum (Plot size: 15 ft R)			
1. *Fraxinus pennsylvanica*	2	Y	FACW
2. *Platanus occidentalis*	2	Y	FACW
3. *Ulmus alata*	2	Y	FACU
4.			
5.			
6.			
7.			
8.			
9.			
	6 = Total Cover		
50% of total cover: 3	20% of total cover: 1		
Herb Stratum (Plot size: 5 ft R)			
1. *Persicaria hydropiper*	30	Y	OBL
2. *Juncus effusus*	70	Y	FACW
3. *Scirpus cyperinus*	10	N	FACW
4. *Carex canescens*	10	N	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	120 = Total Cover		
50% of total cover: 60	20% of total cover: 24		
Woody Vine Stratum (Plot size: 30 Ft R)			
1. *Lonicera japonica*	5	Y	FAC
2.			
3.			
4.			
5.			
	5 = Total Cover		
50% of total cover: 3	20% of total cover: 1		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (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[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 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 ___

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

Vegetation passes dominance test.

SOIL Sampling Point: wnok006e_w

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 5/2	70	7.5YR 4/6	30	C	PL?M	sandy Loam	
10-18	10YR 4/2	60	NA	NA	NA	NA	sandy Loam	Mixed matrix
	2.5Y 7/4	20	NA	NA	NA	NA	sandy Loam	Mixed matrix
	7.5YR 5/6	20	NA	NA	NA	NA	sandy Loam	Mixed matrix

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: NA

Depth (inches): NA

Hydric Soil Present? **Yes** ✓ **No** ___

Remarks:

One indicator of hydric soils met: Depleted matrix (F3).

Wetland data point wnok006e_w facing North

Wetland data point wnok006e_w facing South

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Southeast Reliability Project City/County: NA/Nottoway Sampling Date: 07/28/14
Applicant/Owner: Dominion Transmission State: VA Sampling Point: wnok006_u
Investigator(s): W. Medlin, J. Sweitzer Section, Township, Range: NA
Landform (hillslope, terrace, etc.): natural levee Local relief (concave, convex, none): convex Slope (%): NA
Subregion (LRR or MLRA): LRR P Lat: 37.259061592 Long: -78.182323857 Datum: NAD 1983
Soil Map Unit Name: Mixed alluvial land (Mn) NWI classification: Upland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes [✓] No [ ] (If no, explain in Remarks.)
Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes [✓] No [ ]
Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes [✓]	No [ ]	**Is the Sampled Area within a Wetland?** Yes [ ] No [✓]
Hydric Soil Present?	Yes [ ]	No [✓]	
Wetland Hydrology Present?	Yes [ ]	No [✓]	

Remarks:
This area is an upland natural levee along Flat Creek, a large perennial stream. The adjacent floodplain wetland has been clear-cut, but the riparian area along this levee is still forested. Vegetation criteria met, but hydric soil and wetland hydrology criteria not met. Area is not a wetland.
*Photos 100-0284 to 0288 (WLM camera)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] True Aquatic Plants (B14)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres on Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] 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)
- [ ] Stunted or Stressed Plants (D1)
- [ ] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] Microtopographic Relief (D4)
- [ ] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes [ ] No [✓] Depth (inches): _____
Water Table Present? Yes [ ] No [✓] Depth (inches): _____
Saturation Present? (includes capillary fringe) Yes [ ] No [✓] Depth (inches): _____

Wetland Hydrology Present? Yes [ ] No [✓]

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

Remarks:
Hydrology criteria is not met.

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: wnok006_u

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Betula nigra	40	Y	FACW
2. Pinus taeda	20	Y	FAC
3. Ulmus rubra	15	Y	FAC
4.			
5.			
6.			
	75 = Total Cover		
50% of total cover: 37.5	20% of total cover: 15		
Sapling Stratum (Plot size: 15 ft radius)			
1. Asimina triloba	10	Y	FAC
2.			
3.			
4.			
5.			
6.			
	10 = Total Cover		
50% of total cover: 40	20% of total cover: 16		
Shrub Stratum (Plot size: 15 ft radius)			
1. Asimina triloba	25	Y	FAC
2. Lindera benzoin	15	Y	FAC
3.			
4.			
5.			
6.			
	40 = Total Cover		
50% of total cover: 20	20% of total cover: 8		
Herb Stratum (Plot size: 10 ft radius)			
1. Dichanthelium clandestinum	30	Y	FAC
2. Phytolacca americana	30	Y	FACU
3. Verbesnia alterniflora	20		FAC
4. Oxalis stricta	15		FACU
5. Microstegium vimineum	35	Y	FAC
6. Carex frankii	5		OBL
7. Elymus virginicus	10		FACW
8.			
9.			
10.			
11.			
	145 = Total Cover		
50% of total cover: 72.5	20% of total cover: 29		
Woody Vine Stratum (Plot size: 15 ft radius)			
1. Campsis radicans	25	Y	FAC
2. Vitis rotundifolia	10	Y	FAC
3.			
4.			
5.			
	35 = Total Cover		
50% of total cover: 17.5	20% of total cover: 7		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 10 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 91 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	50	x 2 =	100
FAC species	205	x 3 =	615
FACU species	45	x 4 =	180
UPL species	0	x 5 =	0
Column Totals:	305 (A)		900 (B)

Prevalence Index = B/A = 2.95

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☑ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☑ No ☐

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

Hydrophytic vegetation criteria is met.

SOIL Sampling Point: wnok006_u

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/3	100					FSL	FSL - fine sandy loam
4-20	10YR 4/4	100					FSL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ☐ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: NA

Depth (inches): NA

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Hydric soils criteria is not met.

Upland data point wnok006_u facing North

Upland data point wnok006_u facing South

Wetland data point wnok006e_w soil sample

Upland data point wnok006_u soil sample

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Southeast Reliability Project City/County: NA/Nottoway Sampling Date: 07/29/14
Applicant/Owner: Dominion Transmission State: VA Sampling Point: wnok007f_w
Investigator(s): W. Medlin, J. Sweitzer Section, Township, Range: NA
Landform (hillslope, terrace, etc.): floodplain depression Local relief (concave, convex, none): concave Slope (%): 0-1
Subregion (LRR or MLRA): LRR P Lat: 37.258897717 Long: -78.181714183 Datum: NAD 1983
Soil Map Unit Name: Mixed alluvial land (Mn) NWI classification: PFO1A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes [✓] No [ ] (If no, explain in Remarks.)
Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes [✓] No [ ]
Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes [✓] No [ ]	**Is the Sampled Area within a Wetland?** Yes [✓] No [ ]
Hydric Soil Present?	Yes [✓] No [ ]	
Wetland Hydrology Present?	Yes [✓] No [ ]	

Remarks:
This area is a piedmont floodplain depression that has a drainage slough which connects to Flat Creek. Many migratory birds observed (audible) in this wetland and four American woodcocks were seen. All three criteria are met. Area is a wetland.
*Photos 100-0299 to 0303 (WLM camera)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [✓] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [✓] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] True Aquatic Plants (B14)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres on Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] 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)
- [ ] Stunted or Stressed Plants (D1)
- [✓] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] Microtopographic Relief (D4)
- [✓] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes [ ] No [✓] Depth (inches): _____
Water Table Present? Yes [ ] No [✓] Depth (inches): _____
Saturation Present? (includes capillary fringe) Yes [ ] No [✓] Depth (inches): _____

Wetland Hydrology Present? Yes [ ] No [ ]

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

Remarks:
Hydrology criteria is met.

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: wnok007f_w

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica	40		FACW
2. Betula nigra	40	Y	FACW
3. Carpinus caroliniana	30	Y	FAC
4. Platanus occidentalis	40		FACW
5. Celtis occidentalis	10		FACU
6.			
	160 = Total Cover		
50% of total cover: 80	20% of total cover: 32		
Sapling Stratum (Plot size: 15 ft radius)			
1. Asimina triloba	60	Y	FAC
2. Fraxinus pennsylvanica	20		FACW
3. Carpinus caroliniana	15		FAC
4. Celtis occidentalis	15		FACU
5.			
6.			
	110 = Total Cover		
50% of total cover: 55	20% of total cover: 22		
Shrub Stratum (Plot size: 15 ft radius)			
1. Asimina triloba	55	Y	FAC
2. Lindera benzoin	60	Y	FAC
3.			
4.			
5.			
6.			
	115 = Total Cover		
50% of total cover: 57.5	20% of total cover: 23		
Herb Stratum (Plot size: 10 ft radius)			
1. Boehmeria cylindrica	5	Y	FACW
2. Elymus virginicus	10	Y	FACW
3. Carex intumescens	2		FACW
4. Persicaria hydropiperoides	5	Y	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	22 = Total Cover		
50% of total cover: 11	20% of total cover: 4.4		
Woody Vine Stratum (Plot size: 15 ft radius)			
1. Smilax rotundifolia	10	Y	FAC
2.			
3.			
4.			
5.			
	10 = Total Cover		
50% of total cover: 5	20% of total cover: 2		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	2	x 1 =	2
FACW species	157	x 2 =	314
FAC species	230	x 3 =	690
FACU species	25	x 4 =	100
UPL species	0	x 5 =	0
Column Totals:	414 (A)		1106 (B)

Prevalence Index = B/A = 2.67

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☑ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☑ No ☐

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

Hydrophytic vegetation criteria is met.

SOIL

Sampling Point: wnok007f_w

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2	100					SL	SL - sandy loam
2-6	10YR 4/1	65	5YR 4/6	35	C	PL	clay	some sandy sediment mixed
6-14	10YR 5/1	85	7.5YR 5/8	15	C	M/PL	SCL	SCL - sandy clay loam
14-20	10YR 6/2	90	10YR 5/8	10	C	M	sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ☐ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: NA

Depth (inches): NA

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Hydric soils criteria is met.

Wetland data point wnok007f_w facing South

Wetland data point wnok007f_w facing West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Southeast Reliability Project City/County: Nottoway Sampling Date: 07/29/2014

Applicant/Owner: Dominion Transmission State: VA Sampling Point: wnok007_u

Investigator(s): J. Sweitzer, W. Medlin Section, Township, Range: NA

Landform (hillslope, terrace, etc.): floodplain berm Local relief (concave, convex, none): none Slope (%): 0-1

Subregion (LRR or MLRA): LRR P Lat: 37.258865295 Long: 78.181845957 Datum: NAD 1983

Soil Map Unit Name: Mixed Alluvial Land (Mn) NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** ✓
Hydric Soil Present?	Yes _____ No ✓	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

Photos 104-4636 soil, 4637 S, 4638 E, 4639 W (J. Sweitzer Camera)

Upland plot established on natural levee adjacent to Flat Creek. Upland data point associated with backwater (slough) floodplain wetland. Vegetation and hydrology criteria met, but hydric soil criteria not met. Area is not a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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)
- ___ Stunted or Stressed Plants (D1)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No ✓	Depth (inches): _____
Water Table Present?	Yes _____	No ✓	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No ✓	Depth (inches): _____

Wetland Hydrology Present? Yes ✓ **No** _____

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

NA

Remarks:

Several indicators of wetland hydrology observed due to location of point on natural levee between active floodplain and Flat Creek.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: wnok007_u

Tree Stratum (Plot size: 30 ft R)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Juglans nigra*	60	Y	FACU
2. *Acer negundo*	50	Y	FAC
3. *Celtis occidentalis*	25	N	FACU
4. *Acer rubrum*	5	N	FAC
5. *Betula nigra*	40	Y	FACW
6.			
7.			
	170 = Total Cover		
50% of total cover: 85	20% of total cover: 34		
Sapling/Shrub Stratum (Plot size: 15 ft R)			
1. *Asimina triloba*	40	Y	FAC
2. *Celtis occidentalis*	5	N	FACU
3. *Lindera benzoin*	50	Y	FAC
4.			
5.			
6.			
7.			
8.			
9.			
	95 = Total Cover		
50% of total cover: 48	20% of total cover: 19		
Herb Stratum (Plot size: 5 ft R)			
1. *Viola sp.*	10	Y	NI
2. *Carex sp. (no fruiting bodies)*	20	Y	NI
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	80 = Total Cover		
50% of total cover: 40	20% of total cover: 16		
Woody Vine Stratum (Plot size: 30 Ft R)			
1. *Smilax bona-nox*	5	Y	FACU
2. *Toxicodendron radicans*	2	Y	FAC
3.			
4.			
5.			
	7 = Total Cover		
50% of total cover: 4	20% of total cover: 1		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 71 (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[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 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 ___

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

Vegetation passes dominance test. Typical well drained piedmont floodplain vegetation.

SOIL

Sampling Point: wnok007_u

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-3	10YR 3/1	100	NA	NA	NA	NA	sandy Loam	w/organic material
3-18	10YR 4/4	90	NA	NA	NA	NA	sandy Loam	NA; Mixed matrix
3-18	10 YR 7/3	10	NA				Loamy sand	NA; Mixed matrix

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: NA

Depth (inches): NA

Hydric Soil Present? **Yes** _____ **No** ✓

Remarks:

No indicators of hydric soils observed.

Upland data point wnok007_u facing East

Upland data point wnok007_u facing West

Wetland data point wnok007f_w soil sample

Upland data point wnok007_u soil sample

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Southeast Reliability Project City/County: Nottoway Sampling Date: 07/29/2014

Applicant/Owner: Dominion Transmission State: VA Sampling Point: wnok008f_w

Investigator(s): J. Sweitzer, W. Medlin Section, Township, Range: NA

Landform (hillslope, terrace, etc.): convergent slopes Local relief (concave, convex, none): none Slope (%): 0-3

Subregion (LRR or MLRA): LRR P Lat: 37.254922913 Long: 78.171087116 Datum: NAD 1983

Soil Map Unit Name: Louisburg Sandy Loam, Rolling Phase (Lh) NWI classification: PFO1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** **Yes ✓ No _____**
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

Photos 104-4640 soils, 4641 S, 4642 E, 4643 W

This wetland forms at the convergence of two slopes and is the headwaters of an ephemeral stream (snok009). All 3 criteria met. Area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ✓ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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)
- ___ Stunted or Stressed Plants (D1)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No ✓	Depth (inches): NA
Water Table Present?	Yes _____	No ✓	Depth (inches): NA
Saturation Present? (includes capillary fringe)	Yes _____	No ✓	Depth (inches): NA

Wetland Hydrology Present? Yes ✓ No _____

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

NA

Remarks:

Several primary and secondary hydrology indicators observed. Hydrology criteria met.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: wnok008f_w

Tree Stratum (Plot size: 30 ft R)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	60	Y	FAC
2. *Liquidambar styraciflua*	30	Y	FAC
3. *Salix nigra*	5	N	OBL
4. *Ulmus americana*	5	N	FACW
5. *Liriodendron tulipifera*	10	N	FACU
6.			
7.			
	110 = Total Cover		
50% of total cover: 55	20% of total cover: 22		

Sapling/Shrub Stratum (Plot size: 15 ft R)			
1. *Liquidambar styraciflua*	20	Y	FAC
2. *Ulmus americana*	10	N	FACW
3. *Acer rubrum*	20	Y	FAC
4. *Lindera benzoin*	10	N	FAC
5.			
6.			
7.			
8.			
9.			
	60 = Total Cover		
50% of total cover: 30	20% of total cover: 12		

Herb Stratum (Plot size: 5 ft R)			
1. *Woodwardia areolata*	40	Y	FACW
2. *Woodwardia virginica*	5	N	OBL
3. *Osmunda regalis*	5	N	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	50 = Total Cover		
50% of total cover: 25	20% of total cover: 10		

Woody Vine Stratum (Plot size: 30 Ft R)			
1. *Lonicera japonica*	10	Y	FAC
2. *Smilax rotundifolia*	5	Y	FAC
3.			
4.			
5.			
	15 = Total Cover		
50% of total cover: 8	20% of total cover: 3		

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[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 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 ___

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

Vegetation passes dominance test.

SOIL Sampling Point: wnok008f_w

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/2	50	NA	NA	NA	NA	sandy Loam	with organic
0-5	10YR 5/2	50	NA	NA	NA	NA	sandy Loam	NA
5-7	10YR 5/1	60	NA	NA	NA	NA	sandy Loam	NA
5-7	10YR 3/2	40	NA	NA	NA	NA	sandy Loam	with organic; Mixed Matrix
7-13	10YR 5/1	100	NA	NA	NA	NA	sandy Loam	Mixed Matrix
13-20	10YR 5/1	90	NA	NA	NA	NA	sandy Loam	
13-20	10YR 3/2	10	NA	NA	NA	NA	sandy Loam	Streaking

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: NA

Depth (inches): NA

Hydric Soil Present? **Yes** ✓ **No** ___

Remarks:

One indicator of hydric soils met: Depleted matrix (F3).

Wetland data point wnok008f_w facing South

Wetland data point wnok008f_w facing East

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Southeast Reliability Project City/County: NA/Nottoway Sampling Date: 07/29/14
Applicant/Owner: Dominion Transmission State: VA Sampling Point: wnok008_u
Investigator(s): W. Medlin, J. Sweitzer Section, Township, Range: NA
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 8-12
Subregion (LRR or MLRA): LRR P Lat: 37.254982219 Long: -78.171199470 Datum: NAD 1983
Soil Map Unit Name: Louisburg sandy loam, rolling phase NWI classification: Upland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes [✓] No [ ] (If no, explain in Remarks.)
Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes [✓] No [ ]
Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes [✓]	No [ ]	**Is the Sampled Area within a Wetland?** Yes [ ] No [✓]
Hydric Soil Present?	Yes [ ]	No [✓]	
Wetland Hydrology Present?	Yes [ ]	No [✓]	

Remarks:
This area is an upland hillslope within a mixed pine-hardwood forest with semi-mature trees (~30-40 years old) and well-developed stratification. ß Vegetation criteria met, but hydric soils and hydrology criteria are not met. Area is not a wetland.

*Photos 100-0312 to 0316 (WLM camera)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] True Aquatic Plants (B14)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres on Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] 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)
- [ ] Stunted or Stressed Plants (D1)
- [ ] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] Microtopographic Relief (D4)
- [ ] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes [ ] No [✓] Depth (inches): _____
Water Table Present? Yes [ ] No [✓] Depth (inches): _____
Saturation Present? (includes capillary fringe) Yes [ ] No [✓] Depth (inches): _____

Wetland Hydrology Present? Yes [ ] No [✓]

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

Remarks:
Hydrology criteria is not met.

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: wnok008_u

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus taeda	20		FAC
2. Liriodendron tulipifera	80	Y	FACU
3. Acer rubrum	50	Y	FAC
4.			
5.			
6.			
	150 = Total Cover		
50% of total cover: 75	20% of total cover: 30		
Sapling Stratum (Plot size: 15 ft radius)			
1. Acer rubrum	10	Y	FAC
2.			
3.			
4.			
5.			
6.			
	10 = Total Cover		
50% of total cover: 5	20% of total cover: 2		
Shrub Stratum (Plot size: 15 ft radius)			
1. Carpinus caroliniana	25	Y	FAC
2. Juniperus virginiana	5		FACU
3. Lindera benzoin	5		FAC
4. Asimina triloba	5		FAC
5.			
6.			
	40 = Total Cover		
50% of total cover: 20	20% of total cover: 8		
Herb Stratum (Plot size: 10 ft radius)			
1. Cornus florida	5	Y	FACU
2. Carpinus caroliniana	2	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	7 = Total Cover		
50% of total cover: 3.5	20% of total cover: 1.4		
Woody Vine Stratum (Plot size: 15 ft radius)			
1. Lonicera japonica	60	Y	FAC
2. Smilax rotundifolia	10		FAC
3. Parthenocissus quinquefolia	2		FACU
4.			
5.			
	72 = Total Cover		
50% of total cover: 36	20% of total cover: 14.4		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 71 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	187	x 3 =	561
FACU species	92	x 4 =	368
UPL species	0	x 5 =	0
Column Totals:	279 (A)		929 (B)

Prevalence Index = B/A = 3.33

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☑ No ☐

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

Hydrophytic vegetation criteria is met. Very little herbaceous layer. Organic leaf litter cover the forest floor.

SOIL Sampling Point: wnok008_u

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 4/2	100					SL	SL - sandy loam
2-8	10YR 4/4	100					SL	
8-18	10YR 5/4	100					SL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ☐ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: NA

Depth (inches): NA

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Hydric soils criteria is not met.

Upland data point wnok008_u facing West

Upland data point wnok008_u facing East

Wetland data point wnok008f_w soil sample

Upland data point wnok008_u soil sample

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Southeast Reliability Project City/County: Nottoway Sampling Date: 07/29/2014

Applicant/Owner: Dominion Transmission State: VA Sampling Point: wnok009f_w

Investigator(s): J. Sweitzer, W. Medlin Section, Township, Range: NA

Landform (hillslope, terrace, etc.): convergent slopes Local relief (concave, convex, none): none Slope (%): 0-3

Subregion (LRR or MLRA): LRR P Lat: 37.253982054 Long: 78.168344367 Datum: NAD 1983

Soil Map Unit Name: Mixed Alluvial Land (Mn) NWI classification: PFO1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** **Yes ✓ No _____**
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

Photos 104-4651 soils, 4652 S, 4653 E, 4654 W

This wetland forms at the convergence of two slopes and is the headwaters of an ephemeral stream (begins off ROW). All 3 criteria met. Area is a wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ✓ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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)
- ___ Stunted or Stressed Plants (D1)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): NA

Water Table Present? Yes _____ No ✓ Depth (inches): NA

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): NA

Wetland Hydrology Present? Yes ✓ No _____

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

NA

Remarks:

Several primary and secondary hydrology indicators observed. Hydrology criteria met.

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: wnok009f_w

Tree Stratum (Plot size: 30 ft R)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	30	Y	FAC
2. *Liriodendron tulipifera*	30	Y	FACU
3. *Pinus taeda*	30	Y	FAC
4.			
5.			
6.			
7.			
	90 = Total Cover		
50% of total cover: 45	20% of total cover: 18		
Sapling/Shrub Stratum (Plot size: 15 ft R)			
1. *Ulmus americana*	5	Y	FACW
2. *Asimina triloba*	5	Y	FAC
3. *Lindera benzoin*	5	Y	FAC
4.			
5.			
6.			
7.			
8.			
9.			
	15 = Total Cover		
50% of total cover: 8	20% of total cover: 3		
Herb Stratum (Plot size: 5 ft R)			
1. *Athyrium felix-femina*	30	Y	FAC
2. *Boehmeria cylindrica*	20	Y	FACW
3. *Juncus coriaceus*	10	N	FACW
4. *Persicaria maculosa*	5	N	FACW
5. *Sambucus nigra*	5	N	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	70 = Total Cover		
50% of total cover: 35	20% of total cover: 14		
Woody Vine Stratum (Plot size: 30 Ft R)			
1. *Parthenocissus quinquefolia*	10	Y	FAC
2. *Smilax rotundifolia*	5	Y	FAC
3.			
4.			
5.			
	15 = Total Cover		
50% of total cover: 8	20% of total cover: 3		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 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 ___

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

Vegetation passes dominance test.

SOIL Sampling Point: wnok009f_w

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	2.5Y 5/1	70	7.5YR 4/6	10	C	PL	sandy clay loam	
0-16	10YR 4/1	20	NA	NA	NA	NA	sandy clay loam	
16-20	2.5Y 5/1	90	7.5YR 4/6	10	C	PL	sandy clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: NA

Depth (inches): NA

Hydric Soil Present? **Yes** ✓ **No** ___

Remarks:

One indicator of hydric soils met: Depleted matrix (F3).

Wetland data point wnok009f_w facing South

Wetland data point wnok009f_w facing East

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Southeast Reliability Project City/County: NA/Nottoway Sampling Date: 07/29/14
Applicant/Owner: Dominion Transmission State: VA Sampling Point: wnok009_u
Investigator(s): W. Medlin, J. Sweitzer Section, Township, Range: NA
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 7-10
Subregion (LRR or MLRA): LRR P Lat: 37.253880228 Long: -78.168226153 Datum: NAD 1983
Soil Map Unit Name: Mixed alluvial land (Mn) NWI classification: Upland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes [✓] No [ ] (If no, explain in Remarks.)
Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? Are "Normal Circumstances" present? Yes [✓] No [ ]
Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes [✓]	No [ ]	**Is the Sampled Area within a Wetland?** Yes [ ] No [✓]
Hydric Soil Present?	Yes [ ]	No [✓]	
Wetland Hydrology Present?	Yes [ ]	No [✓]	

Remarks:
This area is an upland hillslope within a mixed pine-hardwood forest that appears to have been planted with loblolly pines in the past. Vegetation criteria met, but hydric soil and hydrology criteria not met. Area is not a wetland.

*Photos 100-0320 to 0324 (WLM camera)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] True Aquatic Plants (B14)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres on Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] 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)
- [ ] Stunted or Stressed Plants (D1)
- [ ] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] Microtopographic Relief (D4)
- [ ] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes [ ]	No [✓]	Depth (inches): _____
Water Table Present?	Yes [ ]	No [✓]	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes [ ]	No [✓]	Depth (inches): _____

Wetland Hydrology Present? Yes [ ] No [✓]

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

Remarks:
Hydrology criteria is not met.

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: wnok009_u

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus taeda	40	Y	FAC
2. Liriodendron tulipifera	80	Y	FACU
3. Quercus phellos	15		FAC
4.			
5.			
6.			
	135 = Total Cover		
50% of total cover: 67.5	20% of total cover: 27		
Sapling Stratum (Plot size: 15 ft radius)			
1. Liriodendron tulipifera	50	Y	FACU
2. Liquidambar styraciflua	15	Y	FAC
3.			
4.			
5.			
6.			
	65 = Total Cover		
50% of total cover: 32.5	20% of total cover: 13		
Shrub Stratum (Plot size: 15 ft radius)			
1. Carya glabra	10	Y	FACU
2. Asimina triloba	5		FAC
3. Liriodendron tulipifera	15	Y	FACU
4. Quercus falcata	5		FACU
5.			
6.			
	35 = Total Cover		
50% of total cover: 17.5	20% of total cover: 7		
Herb Stratum (Plot size: 10 ft radius)			
1. Asimina triloba	5	Y	FAC
2. Euonymus americanus	2	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	7 = Total Cover		
50% of total cover: 3.5	20% of total cover: 1.4		
Woody Vine Stratum (Plot size: 15 ft radius)			
1. Campsis radicans	5	Y	FAC
2.			
3.			
4.			
5.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 56 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	87	x 3 =	261
FACU species	160	x 4 =	640
UPL species	0	x 5 =	0
Column Totals:	247 (A)		901 (B)

Prevalence Index = B/A = 3.65

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☑ No ☐

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

Hydrophytic vegetation criteria is met. Very little herbaceous layer. Pine needles cover the forest floor.

SOIL Sampling Point: wnok009_u

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 5/3	45					SL	SL - sandy loam; mixed matrix
	10YR 3/2	55					SL	mixed matrix
5-14	10YR 5/4	100					SL	
14-20	10YR 6/4	85	7.5YR 5/8	15	C	M	SL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ☐ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: NA

Depth (inches): NA

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Hydric soils criteria is not met.

Upland data point wnok009_u facing West

Upland data point wnok009_u facing North

Wetland data point wnok009f_w soil sample

Upland data point wnok009_u soil sample

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline City/County: NA/Nottoway Sampling Date: 9/11/2014
Applicant/Owner: Dominion Transmission State: VA Sampling Point: WNOL001E-W
Investigator(s): W. Medlin, R. Sheridan Section, Township, Range: NA
Landform (hillslope, terrace, etc.): streamside seep Local relief (concave, convex, none): Concave Slope (%): 1-2
Subregion (LRR or MLRA): LRR P Lat: 37.244930321 Long: -78.139051195 Datum: NAD 83
Soil Map Unit Name: Louisburg sandy loam, eroded hilly phase 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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks: Streamside seepage w/ evidence of groundwater discharge. Area is a wetland.

Photos # 100 - 1121 to 1125 Soils, N, E, S, W

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ 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)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches): NA
Water Table Present?	Yes ☐	No ☑	Depth (inches): NA
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:
Hydrology criteria met.

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: WNO1001F-W

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	60	Y	FAC
2. Nyssa sylvatica	20	Y	FAC
3. Liquidambar Styraciflua	20	Y	FAC
4.			
5.			
6.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Sapling Stratum (Plot size: 15 ft)			
1. Liquidambar Styraciflua	10	Y	FAC
2.			
3.			
4.			
5.			
6.			
	10 = Total Cover		
50% of total cover: 5	20% of total cover: 2		

Shrub Stratum (Plot size: 15 ft)			
1. Vaccinium corymbosum	15	Y	FACW
2. Quercus montana	10	Y	UPL
3. Nyssa sylvatica	10	Y	FAC
4. Liquidambar styraciflua	5	N	FAC
5.			
6.			
	40 = Total Cover		
50% of total cover: 20	20% of total cover: 8		

Herb Stratum (Plot size: 5 ft)			
1. Athyrium asplenioides	30	Y	FAC
2. Glyceria striata	15	Y	OBL
3. Juncus tenuis	5	N	FAC
4. Lycopus virginicus	5	N	FAC
5. Carex crinita	5	N	OBL
6.			
7.			
8.			
9.			
10.			
11.			
	60 = Total Cover		
50% of total cover: 30	20% of total cover: 12		

Woody Vine Stratum (Plot size: 30 ft)			
1. Smilax rotundifolia	10	Y	FAC
2.			
3.			
4.			
5.			
	10 = Total Cover		
50% of total cover: 5	20% of total cover: 2		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☑ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☑ No ☐

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

Criteria met.

SOIL

Sampling Point: WNOL001F_W

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/1	100	-	-	-	-	Sandy/Mucky loam	organic content
2-8	10YR 5/2	100	-	-	-	-	Sandy loam	
8-15	10YR 5/1	95	10YR 5/6	10	C	M	Sandy loam	
15-20	10YR 5/1	80	7.5YR 5/8	20	C	M/PL	sandy clay loam	oxidized root channels

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ☐ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: NA

Depth (inches): NA

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Hydric soils criteria met.

Wetland data point wnol001f_w facing East

Wetland data point wnol001f_w facing West

Wetland data point wnol001f_w soil sample

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline City/County: NA/ Nottoway Sampling Date: 9/11/14
Applicant/Owner: Dominion Transmission State: VA Sampling Point: WNOL001-U
Investigator(s): W. Medlin, R. Sheridan Section, Township, Range: NA
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 15-20
Subregion (LRR or MLRA): LRR P Lat: 37.245018417 Long: -78.139156596 Datum: NAD 83
Soil Map Unit Name: Louisburg Sandy loam, eroded hilly phase 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 [✓]	No [ ]	**Is the Sampled Area within a Wetland?** Yes [ ] No [✓]
Hydric Soil Present?	Yes [ ]	No [✓]	
Wetland Hydrology Present?	Yes [ ]	No [✓]	

Remarks: Upland Hardwood slope forest. Not a wetland.

PHOTOS #1100 - 1126 to 1130 Soils, N, E, S, W

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [ ] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] True Aquatic Plants (B14)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres on Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] 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)
- [ ] Stunted or Stressed Plants (D1)
- [ ] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] Microtopographic Relief (D4)
- [ ] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes [ ]	No [✓]	Depth (inches): NA
Water Table Present?	Yes [ ]	No [✓]	Depth (inches): NA
Saturation Present? (includes capillary fringe)	Yes [ ]	No [✓]	Depth (inches): NA

Wetland Hydrology Present? Yes [ ] No [✓]

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

Remarks: Hydrology criteria not met.

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: WNOL001_U

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	50	Y	FAC
2. Liquidambar styraciflua	50	Y	FAC
3. Nyssa sylvatica	15	N	FAC
4. Liriodendron tulipifera	10	N	FACU
5.			
6.			
	125 = Total Cover		
50% of total cover: 62.5	20% of total cover: 25		
Sapling Stratum (Plot size: 15 ft)			
1. Liquidambar styraciflua	15	Y	FAC
2. Quercus montana	15	Y	FACU
3. Liriodendron tulipifera	10	Y	FACU
4. Nyssa sylvatica	5	N	FAC
5. Juniperus virginiana	5	N	FACU
6.			
	50 = Total Cover		
50% of total cover: 25	20% of total cover: 10		
Shrub Stratum (Plot size: 15 ft)			
1. Quercus montana	25	Y	FACU
2. Ilex opaca	10	Y	FAC
3. Vaccinium corymbosum	10	Y	FACW
4. Quercus alba	5		FACU
5. Carpinus caroliniana	5		FAC
6. Liriodendron tulipifera	5		FACU
	60 = Total Cover		
50% of total cover: 30	20% of total cover: 12		
Herb Stratum (Plot size: 5 ft)			
1. Athyrium asplenioides	20	Y	FAC
2. Polystichum acrostichoides	10	Y	FACU
3. Amelanchier	2	N	
4. Carya tomentosa	2	N	NI
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	34 = Total Cover		
50% of total cover: 17	20% of total cover: 6.8		
Woody Vine Stratum (Plot size: 30 ft)			
1. Vitis rotundifolia	45	Y	FAC
2. Lonicera japonica	15	Y	FAC
3.			
4.			
5.			
	60 = Total Cover		
50% of total cover: 30	20% of total cover: 12		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 12 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 58% (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[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☑ No ☐

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

Criteria Met.

SOIL

Sampling Point: WNOL001_U

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 2/2	100	-	-	-	-	organic duff layer	
1-4	10YR 4/2	100	-	-	-	-	fine sandy loam	
4-18	10YR 6/4	60	-	-	-	-	sandy loam	Mixed matrix
	10YR 4/2	40	-	-	-	-	sandy loam	Mixed matrix
18-20	10YR 5/4	75	7.5YR 4/6	25	C	M	Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ☐ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: NA

Depth (inches): NA

Hydric Soil Present? Yes ☐ No ☑

Remarks: Hydric Soils criteria not met.

Upland data point wnol001_u facing North

Upland data point wnol001_u facing West

Upland data point wnol001_u soil sample

shares upland point w/ wnol003f_w (wnol003_u)

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline City/County: Nottoway Sampling Date: 09/11/14
Applicant/Owner: ~~R Sheridan, W. Medlin~~ Dominion State: VA Sampling Point: WNOL002f_w
Investigator(s): R. Sheridan, W. Medlin Section, Township, Range: NA
Landform (hillslope, terrace, etc.): Seepage slope Local relief (concave, convex, none): concave Slope (%): 5-8
Subregion (LRR or MLRA): LRRP Lat: 37.243021418 Long: -78.129510694 Datum: NAD83
Soil Map Unit Name: Louisburg sandy loam, rolling phase 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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks: Forested headwater seepage slope. Area is a wetland. Upland data point WNOL003_U corresponds to this wetland and justifies the boundary delineation.
Photos: 100-1162 to 1164 Soils, N, E, SW

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ 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)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches):
Water Table Present?	Yes ☑	No ☐	Depth (inches): 10
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 0

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:
Hydrology criteria met.

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: wn01002f_w

Tree Stratum (Plot size: 30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Liriodendron tulipifera	15	Y	FACU
2. Acer rubrum	15	Y	FAC
3. Carya tomentosa	15	Y	NI
4. Magnolia virginiana	5	N	FACW
5.			
6.			
	50	= Total Cover	

50% of total cover: 25 20% of total cover: 10

Sapling Stratum (Plot size: 15ft)			
1. Acer rubrum	5	Y	FAC
2. Liquidambar Styraciflua	5	Y	FAC
3.			
4.			
5.			
6.			
	10	= Total Cover	

50% of total cover: 5 20% of total cover: 2

Shrub Stratum (Plot size: 15ft)			
1. NA	—		
2.			
3.			
4.			
5.			
6.			
		= Total Cover	

50% of total cover: _____ 20% of total cover: _____

Herb Stratum (Plot size: 5ft)			
1. Woodwardia virginica	25	Y	OBL
2. Elaphantopus carolinianus	5	N	FACU
3. Nyssa sylvatica	5	N	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	35	= Total Cover	

50% of total cover: 17.5 20% of total cover: 7

Woody Vine Stratum (Plot size: 30ft)			
1. Lonicera japonica	5	Y	FAC
2. Smilax rotundifolia	2	Y	FAC
3.			
4.			
5.			
	7	= Total Cover	

50% of total cover: 3.5 20% of total cover: 1.4

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (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[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☑ No ☐

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

Criteria Met.

SOIL

Sampling Point: WNOL002f-W

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 3/1	100	NA	—	—	—	Sandy Loam	
9-20	10YR 6/1	100	NA	—	—	—	Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ☐ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: NA

Depth (inches): NA

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Soil criteria met.

Wetland data point wnol002f_w facing North

Wetland data point wnol002f_w facing West

Wetland data point wnol002f_w soil sample

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline City/County: NA/ Nottoway Sampling Date: 9/11/14
Applicant/Owner: Dominion Transmission State: VA Sampling Point: WNOL003F-W
Investigator(s): W. Medlin, R. Sheridan Section, Township, Range: NA
Landform (hillslope, terrace, etc.): seepage slope Local relief (concave, convex, none): ~~Convex~~ Concave Slope (%): 5-6
Subregion (LRR or MLRA): LRR P Lat: 37.242763939 Long: -78.129416041 Datum: NAD 83
Soil Map Unit Name: Louisburg sandy loam, rolling phase 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 ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks: Forested Seepage Slope. Drains to SNOL007. Area is a wetland

PHOTOS # 100 - 1150 to 1153 Soils, N, E, S, W

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ 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)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches): NA
Water Table Present?	Yes ☐	No ☑	Depth (inches): NA
Saturation Present? (includes capillary fringe)	Yes ☑	No ☐	Depth (inches): 4

Wetland Hydrology Present? Yes ☑ No ☐

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

NA

Remarks:

Hydrology criteria met.

VEGETATION (Five Strata) – Use scientific names of plants. Sampling Point: WNDLC03F-W

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Liriodendron tulipifera	60	Y	FACU
2. Ulmus americana	25	Y	FACW
3. Liquidambar styraciflua	25	Y	FAC
4.			
5.			
6.			
	110 = Total Cover		
50% of total cover: 55	20% of total cover: 22		
Sapling Stratum (Plot size: 15 ft)			
1. NA			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		
50% of total cover:	20% of total cover:		
Shrub Stratum (Plot size: 15 ft)			
1. Ilex opaca	10	Y	FAC
2. Juniperus virginiana	5	Y	FACU
3.			
4.			
5.			
6.			
	15 = Total Cover		
50% of total cover: 7.5	20% of total cover: 3		
Herb Stratum (Plot size: 5 ft)			
1. Woodwardia virginica	15	Y	OBL
2. Microstegium vimineum	15	Y	FAC
3. Lycopus virginicus	10	Y	OBL
4. Osmunda regalis	5	N	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	45 = Total Cover		
50% of total cover: 22.5	20% of total cover: 9		
Woody Vine Stratum (Plot size: 30 ft)			
1. Smilax rotundifolia	5	Y	FAC
2.			
3.			
4.			
5.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (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[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes ☑ No ☐

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

Criteria Met.

SOIL Sampling Point: WNDL003F-W

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 2/2	100	-	-	-	-	Sandy loam	high organic content
1-7	10YR 4/2	100	-	-	-	-	Sandy loam	
7-16	10YR 5/2	90	10YR 6/8	10	C	M	Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10) **(LRR N)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ☐ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: NA

Depth (inches): NA

Hydric Soil Present? Yes ☑ No ☐

Remarks: Hydric Soils criteria met.

Wetland data point wnol003f_w facing North

Wetland data point wnol003f_w facing South

Wetland data point wnol003f_w soil sample

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline City/County: NA/ Nottoway Sampling Date: 9/11/2014
Applicant/Owner: Dominion Transmission State: VA Sampling Point: WNOL003_U
Investigator(s): W. Medlin, R. Sheridan Section, Township, Range: NA
Landform (hillslope, terrace, etc.): small ridge/slope Local relief (concave, convex, none): convex Slope (%): 3-4
Subregion (LRR or MLRA): LRR P Lat: 37.242872728 Long: -78.129466936 Datum: NAD83
Soil Map Unit Name: Louisburg sandy loam, rolling phase 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 ☐	No ☐	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks: Upland HW Forest, This upland data point applies to both WNOL003 and WNOL002 and adequately justifies the delineated boundary. Area is not a wetland.

PHOTOS # 100 – 1157 to 1161 Soils, N, E, S, W

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ 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)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☑	Depth (inches): NA
Water Table Present?	Yes ☐	No ☑	Depth (inches): NA
Saturation Present? (includes capillary fringe)	Yes ☐	No ☑	Depth (inches): NA

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:
Hydrology criteria not met.