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

Tree Stratum (Plot size: 0)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	30	Yes	FAC
2. *Quercus alba*	20	Yes	FACU
3. *Quercus bicolor*	20	Yes	FACW
4. *Pinus strobus*	10	No	FACU
5. *Platanus occidentalis*	5	No	FACW
6.			
7.			
	85 = Total Cover		

50% of total cover: 42.5   20% of total cover: 17

Sapling/Shrub Stratum (Plot size: 0)			
1. *Acer rubrum*	10	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	10 = Total Cover		

50% of total cover: 5   20% of total cover: 2

Herb Stratum (Plot size: 0)			
1. *Carex lupulina*	50	Yes	OBL
2.			
3.			
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: 0)			
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		

50% of total cover: 0   20% of total cover: 0

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	50	x 1 =	50
FACW species	25	x 2 =	50
FAC species	40	x 3 =	120
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column Totals:	145 (A)		340 (B)

Prevalence Index = B/A = 2.34

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.)

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	95	7.5YR 4/6	5	C	PL/M	SIC	
2-5	10YR 5/1	90	10YR 6/6	3	C	M	C	
			7.5YR 4/6	7	C	PL/M		
5-18	2.5Y 6/2	60	7.5YR 5/8	25	C	M	C	
			5YR 4/6	15	C	PL		

[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)	___ Dark Surface (S7)	___ 2 cm Muck (A10) **(MLRA 147)**
___ Histic Epipedon (A2)	___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Thin Dark Surface (S9) **(MLRA 147, 148)**	**(MLRA 147, 148)**
___ Hydrogen Sulfide (A4)	___ Loamy Gleyed Matrix (F2)	___ Piedmont Floodplain Soils (F19)
___ Stratified Layers (A5)	___ Depleted Matrix (F3)	**(MLRA 136, 147)**
___ 2 cm Muck (A10) **(LRR N)**	___ Redox Dark Surface (F6)	___ Very Shallow Dark Surface (TF12)
___ Depleted Below Dark Surface (A11)	___ Depleted Dark Surface (F7)	___ Other (Explain in Remarks)
___ Thick Dark Surface (A12)	___ Redox Depressions (F8)	
___ Sandy Mucky Mineral (S1) **(LRR N,**	___ Iron-Manganese Masses (F12) **(LRR N,**	
MLRA 147, 148)	**MLRA 136)**	
___ Sandy Gleyed Matrix (S4)	___ Umbric Surface (F13) **(MLRA 136, 122)**	[3]Indicators of hydrophytic vegetation and
___ Sandy Redox (S5)	___ Piedmont Floodplain Soils (F19) **(MLRA 148)**	wetland hydrology must be present,
___ Stripped Matrix (S6)	___ Red Parent Material (F21) **(MLRA 127, 147)**	unless disturbed or problematic.

Restrictive Layer (if observed):

   Type: _____

   Depth (inches): _____

Hydric Soil Present?   Yes _____   No ✔

Remarks:

Photo 1
Wetland data point wbaf001f_w facing north

Photo 2
Wetland data point wbaf001f_w facing south

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Atlantic Coast Pipeline   City/County: Bath County   Sampling Date: 4/21/2016

Applicant/Owner: Dominion   State: VA   Sampling Point: wbaf001e_w

Investigator(s): SH, SA   Section, Township, Range: No PLSS in this area

Landform (hillslope, terrace, etc.): Drainage   Local relief (concave, convex, none): concave   Slope (%): 2

Subregion (LRR or MLRA): S   Lat: 38.09706137   Long: -79.55901313   Datum: WGS 1984

Soil Map Unit Name: NWI classification: None

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

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

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

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

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

Remarks:
Disturbed hydrology bermmed up area creating impoundment obaf001

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)	___ Aquatic Fauna (B13)
___ High Water Table (A2)	___ Marl Deposits (B15) **(LRR U)**
✔ Saturation (A3)	___ Hydrogen Sulfide Odor (C1)
___ Water Marks (B1)	✔ Oxidized Rhizospheres along Living Roots (C3)
___ Sediment Deposits (B2)	___ Presence of Reduced Iron (C4)
___ Drift Deposits (B3)	___ Recent Iron Reduction in Tilled Soils (C6)
___ Algal Mat or Crust (B4)	___ Thin Muck Surface (C7)
___ Iron Deposits (B5)	___ Other (Explain in Remarks)
___ Inundation Visible on Aerial Imagery (B7)	
___ Water-Stained Leaves (B9)	

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)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
✔ FAC-Neutral Test (D5)
___ Sphagnum moss (D8) **(LRR T, U)**

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): 0	**Wetland Hydrology Present? Yes ✔ No _____**

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

Remarks:

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

Tree Stratum (Plot size: 0)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0 = Total Cover		

50% of total cover: 0   20% of total cover: 0

Sapling/Shrub Stratum (Plot size: 0)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0 = Total Cover		

50% of total cover: 0   20% of total cover: 0

Herb Stratum (Plot size: 0)	Absolute % Cover	Dominant Species?	Indicator Status
1. Arthraxon hispidus	85	Yes	FAC
2. Poa palustris	10	No	FAC
3. Carex lupulina	10	No	OBL
4. Juncus effusus	5	No	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	110 = Total Cover		

50% of total cover: 55   20% of total cover: 22

Woody Vine Stratum (Plot size: 0)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		

50% of total cover: 0   20% of total cover: 0

Dominance Test worksheet:

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

Total Number of Dominant
Species Across All Strata: 1 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15	x 1 =	15
FACW species	0	x 2 =	0
FAC species	95	x 3 =	285
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	110 (A)		300 (B)

Prevalence Index = B/A = 2.72

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
✔ 2 - Dominance Test is >50%
✔ 3 - Prevalence Index is ≤3.0[1]
___ 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 3.28 ft (1 m) tall.

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

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

Hydrophytic Vegetation Present?   Yes ✔   No _____

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

SOIL

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	2.5Y 5/3	95	7.5YR 5/6	5	C	M	C	
4-10	2.5Y 5/1	85	5YR 4/6	5	C	PL	C	
			7.5YR 5/8	10	C	M		
10-18	2.5Y 6/2	85	10YR 5/6	15	C	M	C	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)   **Indicators for Problematic Hydric Soils[3]:**

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**

- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ✔ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present?   Yes __✔__   No _____

Remarks:

Photo 1
Wetland data point wbaf001e_w facing east

Photo 2
Wetland data point wbaf001e_w facing west

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline   City/County: Bath County   Sampling Date: 4/21/2016

Applicant/Owner: Dominion   State: VA   Sampling Point: wbaf001_u

Investigator(s): SH, SA   Section, Township, Range: No PLSS in this area

Landform (hillslope, terrace, etc.): Hillslope   Local relief (concave, convex, none): concave   Slope (%): 3

Subregion (LRR or MLRA): S   Lat: 38.09682859   Long: -79.55902609   Datum: WGS 1984

Soil Map Unit Name: NWI classification: None

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

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

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

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

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

Remarks:
Does not pass vegetation

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Field Observations:

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

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

Saturation Present? Yes ✔ No _____ Depth (inches): 6   **Wetland Hydrology Present? Yes ✔ No _____**
(includes capillary fringe)

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

Remarks:

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

Sampling Point: wbaf001_u

Tree Stratum (Plot size: ___0___)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus alba*	30	Yes	FACU
2. *Pinus strobus*	30	Yes	FACU
3. *Acer rubrum*	20	Yes	FAC
4.			
5.			
6.			
7.			
	80 = Total Cover		
50% of total cover: __40__ 20% of total cover: __16__			

Sapling/Shrub Stratum (Plot size: ___0___)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	10	Yes	FAC
2. *Pinus strobus*	5	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	15 = Total Cover		
50% of total cover: __7.5__ 20% of total cover: __3__			

Herb Stratum (Plot size: ___0___)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Carex brevior*	5	Yes	UPL
2. *Gaultheria procumbens*	5	Yes	FACU
3. *Pinus strobus*	3	No	FACU
4. *Athyrium asplenioides*	3	No	FAC
5. *Acer rubrum*	2	No	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	18 = Total Cover		
50% of total cover: __9__ 20% of total cover: __3.6__			

Woody Vine Stratum (Plot size: ___0___)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: __0__ 20% of total cover: __0__			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: __2__ (A)

Total Number of Dominant Species Across All Strata: __7__ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: __28.57142857__ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	35	x 3 =	105
FACU species	73	x 4 =	292
UPL species	5	x 5 =	25
Column Totals:	113 (A)		422 (B)

Prevalence Index = B/A = __3.73__

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.)

SOIL

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	7.5YR 4/1	100					CL	
1-4	2.5Y 5/1	90	7.5YR 4/6	10	C	M	C	
4-16	2.5Y 6/2	80	10YR 5/6	20	C	M	C	

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

Hydric Soil Indicators:

		Indicators for Problematic Hydric Soils[3]:
___ Histosol (A1)	___ Dark Surface (S7)	___ 2 cm Muck (A10) **(MLRA 147)**
___ Histic Epipedon (A2)	___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Thin Dark Surface (S9) **(MLRA 147, 148)**	**(MLRA 147, 148)**
___ Hydrogen Sulfide (A4)	___ Loamy Gleyed Matrix (F2)	___ Piedmont Floodplain Soils (F19)
___ Stratified Layers (A5)	✔ Depleted Matrix (F3)	**(MLRA 136, 147)**
___ 2 cm Muck (A10) **(LRR N)**	___ Redox Dark Surface (F6)	___ Very Shallow Dark Surface (TF12)
___ Depleted Below Dark Surface (A11)	___ Depleted Dark Surface (F7)	___ Other (Explain in Remarks)
___ Thick Dark Surface (A12)	___ Redox Depressions (F8)	
___ Sandy Mucky Mineral (S1) **(LRR N,**	___ Iron-Manganese Masses (F12) **(LRR N,**	
MLRA 147, 148)	**MLRA 136)**	
___ Sandy Gleyed Matrix (S4)	___ Umbric Surface (F13) **(MLRA 136, 122)**	[3]Indicators of hydrophytic vegetation and
___ Sandy Redox (S5)	___ Piedmont Floodplain Soils (F19) **(MLRA 148)**	wetland hydrology must be present,
___ Stripped Matrix (S6)	___ Red Parent Material (F21) **(MLRA 127, 147)**	unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present?   Yes __✔__   No _____

Remarks:

Photo 1
Upland data point wbaf001 facing southwest

Photo 2
Upland data point wbaf001 facing east

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: ACP City/County: Bath Sampling Date: 3/16/16

Applicant/Owner: Dominion State: VA Sampling Point: wbar004e_w

Investigator(s): J Benton Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR or MLRA): LRRN Lat: 38.10122 Long: -79.51052 Datum: WGS-84

Soil Map Unit Name: Atkins Silt loam, 0-3% slopes, occ. Flooded NWI classification: PEM

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

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

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

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____ No X	Depth (inches): N/A	
Water Table Present?	Yes X No _____	Depth (inches): 10	
Saturation Present? (includes capillary fringe)	Yes X No _____	Depth (inches): 4	Wetland Hydrology Present? Yes X No _____

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.   Sampling Point: Wbar004e_w

Tree Stratum (Plot size: 30 x 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. none			
2.			
3.			
4.			
5.			
6.			
7.			
0 = Total Cover			
50% of total cover: 0 20% of total cover: 0			

Sapling/Shrub Stratum (Plot size: 30 x 30 ft)			
1. Salix nigra	5	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
5 = Total Cover			
50% of total cover: 2.5 20% of total cover: 1			

Herb Stratum (Plot size: 30 x 30 ft)			
1. Festuca rubra	20	Y	FACU
2. Juncus effusus	10	Y	FACW
3. Rubus argutus	5	N	FACU
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: 30 x 30 ft)			
1. none			
2.			
3.			
4.			
5.			
0 = Total Cover			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 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

X 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 X   No _____

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

SOIL

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
0-14	2.5y 4/2	80	7.5YR 4/6	10	C	M	L	
			7.5YR 4/6	10	C	PL		oxidized rhizospheres
14-20	2.5y 4/2	80	7.5YR 4/6	20	C	M	SiL	

[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)
- X 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)

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)
- ___ Red Parent Material (TF2)
- ___ 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: _____

Depth (inches): _____

Hydric Soil Present? Yes　X　　No _____

Remarks:

Wetland data point wbar004e_w facing south.

Wetland data point wbar004e_w facing north.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: __ACP__ City/County: __Bath__ Sampling Date: __3/16/16__
Applicant/Owner: __Dominion__ State: __VA__ Sampling Point: __wbar004_u__
Investigator(s): __JBenton__ Section, Township, Range: __N/A__
Landform (hillslope, terrace, etc.): __floodplain__ Local relief (concave, convex, none): __concave__ Slope (%): __0-2__
Subregion (LRR or MLRA): __LRR N__ Lat: __38.10122__ Long: __-79.51047__ Datum: __WGS-84__
Soil Map Unit Name: __Atkins silt loam, 0-3% slopes, occ. flooded__ NWI classification: __N/A__
Are climatic / hydrologic conditions on the site typical for this time of year? Yes __X__ No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes __X__ No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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 __X__	Depth (inches): __N/A__	
Water Table Present?	Yes _____ No __X__	Depth (inches): __>20__	
Saturation Present? (includes capillary fringe)	Yes _____ No __X__	Depth (inches): __>20__	Wetland Hydrology Present? Yes _____ No __X__

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

Remarks:

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

Sampling Point: Wbar 004_u

Tree Stratum (Plot size: 30 x 30 Ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. none			
2.			
3.			
4.			
5.			
6.			
7.			

0 = Total Cover

50% of total cover: 0   20% of total cover: 0

Sapling/Shrub Stratum (Plot size: 30 x 30 ft)			
1. none			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

0 = Total Cover

50% of total cover: 0   20% of total cover: 0

Herb Stratum (Plot size: 30 x 30 Ft)			
1. Festuca sp.	30	Y	FACU
2. Andropogon virginicus	20	Y	FACU
3. Rubus argutus	5	N	FACU
4. Bidens sp.	5	N	—
5.			
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 x 30 Ft)			
1. none			
2.			
3.			
4.			
5.			

0 = Total Cover

50% of total cover: 0   20% of total cover: 0

Dominance Test worksheet:

Number of Dominant Species
That Are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species
That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	55	x 4 =	220
UPL species	0	x 5 =	0
Column Totals:	55 (A)		220 (B)

Prevalence Index = B/A = 4.0

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 X

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

SOIL

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
0-8	2.5Y 4/4	100					L	
8-20	2.5Y 4/4	90	7.5YR 4/6	10	C	M	L	

[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)

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)
- ___ Red Parent Material (TF2)
- ___ 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: _____

Depth (inches): _____

Hydric Soil Present?   Yes _____   No ☒

Remarks:

Upland data point wbar004_u facing south.

Upland data point wbar004_u facing north.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: __ACP__   City/County: __Bath__   Sampling Date: __3/16/16__

Applicant/Owner: __Dominion__   State: __VA__   Sampling Point: __wbar-003e-w__

Investigator(s): __J Benton__   Section, Township, Range: __N/A__

Landform (hillslope, terrace, etc.): __Floodplain__   Local relief (concave, convex, none): __Concave__   Slope (%): __0-2__

Subregion (LRR or MLRA): __LRRN__   Lat: __38.10203__   Long: __-79.50894__   Datum: __WGS-84__

Soil Map Unit Name: __Nicelytown silt loam, 3-8% slopes__   NWI classification: __PEM__

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

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

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

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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)
_X_ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____ No _X_	Depth (inches): __N/A__	
Water Table Present?	Yes _X_ No _____	Depth (inches): __14__	
Saturation Present? (includes capillary fringe)	Yes _X_ No _____	Depth (inches): __6__	Wetland Hydrology Present? Yes _X_ No _____

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

Remarks:

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

Sampling Point: Wbur 003e_w

Tree Stratum (Plot size: 30×30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. none			
2.			
3.			
4.			
5.			
6.			
7.			

0 = Total Cover
50% of total cover: 0   20% of total cover: 0

Sapling/Shrub Stratum (Plot size: 30×30ft)			
1. none			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

0 = Total Cover
50% of total cover: 0   20% of total cover: 0

Herb Stratum (Plot size: 30×30ft)			
1. Juncus effusus	30	Y	FACW
2. Scirpus cyperinus	15	Y	FACW
3. Festuca rubra	15	Y	FACU
4. Ludwigia alternifolia	10	N	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			

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

Woody Vine Stratum (Plot size: 30×30ft)			
1. none			
2.			
3.			
4.			
5.			

0 = Total Cover
50% of total cover: 0   20% of total cover: 0

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 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

X 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 X   No _____

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

SOIL

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
0-20	2.5Y 3/1	85	7.5YR 4/6	15	C	M	L	

[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)	___ Dark Surface (S7)	___ 2 cm Muck (A10) (MLRA 147)
___ Histic Epipedon (A2)	___ Polyvalue Below Surface (S8) (MLRA 147, 148)	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Thin Dark Surface (S9) (MLRA 147, 148)	(MLRA 147, 148)
___ Hydrogen Sulfide (A4)	___ Loamy Gleyed Matrix (F2)	___ Piedmont Floodplain Soils (F19)
___ Stratified Layers (A5)	___ Depleted Matrix (F3)	(MLRA 136, 147)
___ 2 cm Muck (A10) (LRR N)	X Redox Dark Surface (F6)	___ Red Parent Material (TF2)
___ Depleted Below Dark Surface (A11)	___ Depleted Dark Surface (F7)	___ Very Shallow Dark Surface (TF12)
___ Thick Dark Surface (A12)	___ Redox Depressions (F8)	___ Other (Explain in Remarks)
___ Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)	___ Iron-Manganese Masses (F12) (LRR N, MLRA 136)	
___ Sandy Gleyed Matrix (S4)	___ Umbric Surface (F13) (MLRA 136, 122)	[3]Indicators of hydrophytic vegetation and
___ Sandy Redox (S5)	___ Piedmont Floodplain Soils (F19) (MLRA 148)	wetland hydrology must be present,
___ Stripped Matrix (S6)		unless disturbed or problematic.

Indicators for Problematic Hydric Soils[3]:

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present?   Yes X   No _____

Remarks:

Eastern Mountains and Piedmont – Version 2.0

Wetland data point wbar003e_w facing north.

Wetland data point wbar003e_w facing south.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: ACP   City/County: Bath   Sampling Date: 3/16/16

Applicant/Owner: Dominion   State: VA   Sampling Point: wbar003_u

Investigator(s): JBenton   Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): hillslope   Local relief (concave, convex, none): Concave   Slope (%): 2-4

Subregion (LRR or MLRA): LRRN   Lat: 38.10203   Long: -79.50888   Datum: WGS-84

Soil Map Unit Name: Nicelytown silt loam, 3-8 % slopes   NWI classification: N/A

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

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

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

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

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

Remarks:

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 X	Depth (inches): N/A	
Water Table Present?	Yes _____ No X	Depth (inches): >20	
Saturation Present? (includes capillary fringe)	Yes _____ No X	Depth (inches): >20	Wetland Hydrology Present? Yes _____ No X

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

Remarks:

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

Tree Stratum (Plot size: 30 x 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. none			
2.			
3.			
4.			
5.			
6.			
7.			

0 = Total Cover
50% of total cover: 0   20% of total cover: 0

Sapling/Shrub Stratum (Plot size: 30 x 30 ft)			
1. none			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

0 = Total Cover
50% of total cover: 0   20% of total cover: 0

Herb Stratum (Plot size: 30 x 30 ft)			
1. Festuca rubra	60	Y	FACU
2. Andropogon virginicus	20	Y	FACU
3. Trifolium repens	5	N	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			

85 = Total Cover
50% of total cover: 42.5   20% of total cover: 17

Woody Vine Stratum (Plot size: 30 x 30 ft)			
1. none			
2.			
3.			
4.			
5.			

0 = Total Cover
50% of total cover: 0   20% of total cover: 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	85	x 4 =	340
UPL species	0	x 5 =	0
Column Totals:	85 (A)		340 (B)

Prevalence Index = B/A = 4.0

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 X

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

SOIL

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	2.5y 3/3	100					L	
6-20	2.5y 5/6	90	7.5yR 5/8	10	C	M	L	

[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)

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)
___ Red Parent Material (TF2)
___ 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: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No __X__

Remarks:

Upland data point wbar003_u facing north.

Upland data point wbar003_u facing south.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline   City/County: Bath County   Sampling Date: 6/13/2016

Applicant/Owner: DOMINION   State: VA   Sampling Point: wbaz001e_w

Investigator(s): Team Z   Section, Township, Range: No PLSS in this area

Landform (hillslope, terrace, etc.): Floodplain   Local relief (concave, convex, none): _____   Slope (%): 3

Subregion (LRR or MLRA): S   Lat: 38.11791497   Long: -79.50044236   Datum: WGS 1984

Soil Map Unit Name: Maurertown silty clay loam, 0 to 3 percent slopes, rarely flooded   NWI classification: PEM

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

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

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

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

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

Remarks:
This is a moderately large PEM wetland area.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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? Yes ✔ No _____ Depth (inches): 3
(includes capillary fringe)

Wetland Hydrology Present? Yes ✔ No_____

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

Remarks:

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

Sampling Point: wbaz001e_w

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *none*	0		
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling/Shrub Stratum (Plot size: 15)			
1. *none*	0		
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 5)			
1. *Juncus effusus*	50	Yes	FACW
2. *Scirpus atrovirens*	30	Yes	OBL
3. *Carex vulpinoidea*	10	No	OBL
4. *Persicaria maculosa*	10	No	FACW
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: 30)			
1. *none*	0		
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	40	x 1 =	40
FACW species	60	x 2 =	120
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		160 (B)

Prevalence Index = B/A = 1.6

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.)

SOIL

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					SICL	
2-20	10YR 5/2	50	10YR 5/6	50	C	PL/M	SICL	

[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)	___ Dark Surface (S7)	**Indicators for Problematic Hydric Soils[3]:**
___ Histic Epipedon (A2)	___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**	___ 2 cm Muck (A10) **(MLRA 147)**
___ Black Histic (A3)	___ Thin Dark Surface (S9) **(MLRA 147, 148)**	___ Coast Prairie Redox (A16)
___ Hydrogen Sulfide (A4)	___ Loamy Gleyed Matrix (F2)	**(MLRA 147, 148)**
___ Stratified Layers (A5)	✔ Depleted Matrix (F3)	___ Piedmont Floodplain Soils (F19)
___ 2 cm Muck (A10) **(LRR N)**	___ Redox Dark Surface (F6)	**(MLRA 136, 147)**
___ Depleted Below Dark Surface (A11)	___ Depleted Dark Surface (F7)	___ Very Shallow Dark Surface (TF12)
___ Thick Dark Surface (A12)	___ Redox Depressions (F8)	___ Other (Explain in Remarks)
___ Sandy Mucky Mineral (S1) **(LRR N,**	___ Iron-Manganese Masses (F12) **(LRR N,**	
MLRA 147, 148)	**MLRA 136)**	
___ Sandy Gleyed Matrix (S4)	___ Umbric Surface (F13) **(MLRA 136, 122)**	[3]Indicators of hydrophytic vegetation and
___ Sandy Redox (S5)	___ Piedmont Floodplain Soils (F19) **(MLRA 148)**	wetland hydrology must be present,
___ Stripped Matrix (S6)	___ Red Parent Material (F21) **(MLRA 127, 147)**	unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present?   **Yes** ✔___   **No** _____

Remarks:

Wetland data point WBAZ001e_w facing west, culvert

Wetland data point WBAZ001e_w facing east

Wetland data point WBAZ001e_w facing north

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline   City/County: Bath County   Sampling Date: 6/13/2016

Applicant/Owner: DOMINION   State: VA   Sampling Point: wbaz001_u

Investigator(s): Team Z   Section, Township, Range: No PLSS in this area

Landform (hillslope, terrace, etc.): Floodplain   Local relief (concave, convex, none): _____   Slope (%): 3

Subregion (LRR or MLRA): S   Lat: 38.11793827   Long: -79.50051045   Datum: WGS 1984

Soil Map Unit Name: Maurertown silty clay loam, 0 to 3 percent slopes, rarely flooded   NWI classification: UPL

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 is an upland area associated with wbaz001.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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? Yes _____ No ✔ Depth (inches): _____
(includes capillary fringe)   **Wetland Hydrology Present? Yes _____ No ✔**

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

Remarks:

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

Sampling Point: wbaz001_u

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *none*	0		
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling/Shrub Stratum (Plot size: 15)			
1. *none*	0		
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 5)			
1. *Poa pratensis*	80	Yes	FACU
2. *Trifolium repens*	10	No	FACU
3. *Plantago lanceolata*	10	No	UPL
4.			
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: 30)			
1. *none*	0		
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test worksheet:

Number of Dominant Species
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant
Species Across All Strata: 1 (B)

Percent of Dominant Species
That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	90	x 4 =	360
UPL species	10	x 5 =	50
Column Totals:	100 (A)		410 (B)

Prevalence Index = B/A = 4.1

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.)

SOIL

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 4/3	100					SICL	
3-19	10YR 5/4	100					SICL	

[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)	___ Dark Surface (S7)	___ 2 cm Muck (A10) **(MLRA 147)**
___ Histic Epipedon (A2)	___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Thin Dark Surface (S9) **(MLRA 147, 148)**	**(MLRA 147, 148)**
___ Hydrogen Sulfide (A4)	___ Loamy Gleyed Matrix (F2)	___ Piedmont Floodplain Soils (F19)
___ Stratified Layers (A5)	___ Depleted Matrix (F3)	**(MLRA 136, 147)**
___ 2 cm Muck (A10) **(LRR N)**	___ Redox Dark Surface (F6)	___ Very Shallow Dark Surface (TF12)
___ Depleted Below Dark Surface (A11)	___ Depleted Dark Surface (F7)	___ Other (Explain in Remarks)
___ Thick Dark Surface (A12)	___ Redox Depressions (F8)	
___ Sandy Mucky Mineral (S1) **(LRR N,**	___ Iron-Manganese Masses (F12) **(LRR N,**	
MLRA 147, 148)	**MLRA 136)**	
___ Sandy Gleyed Matrix (S4)	___ Umbric Surface (F13) **(MLRA 136, 122)**	[3]Indicators of hydrophytic vegetation and
___ Sandy Redox (S5)	___ Piedmont Floodplain Soils (F19) **(MLRA 148)**	wetland hydrology must be present,
___ Stripped Matrix (S6)	___ Red Parent Material (F21) **(MLRA 127, 147)**	unless disturbed or problematic.

Indicators for Problematic Hydric Soils[3]:

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present?   Yes _____   No ✔

Remarks:

Upland data point WBAZ001_u facing west

Upland data point WBAZ001_u facing north

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: ACP City/County: Bath Sampling Date: 3/5/16
Applicant/Owner: Dominion State: VA Sampling Point: Wbar002F-W
Investigator(s): J Benton Section, Township, Range: N/A
Landform (hillslope, terrace, etc.): headwater Local relief (concave, convex, none): Concave Slope (%): 2-4
Subregion (LRR or MLRA): LRRN Lat: 38.11586 Long: -79.49704 Datum: WGS-84
Soil Map Unit Name: Nicelytown silt loam, 3-8% slopes NWI classification: PFO
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

NCWAM: Headwater forest

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)
___ Surface Soil Cracks (B6)
___ Sparsely Vegetated Concave Surface (B8)
X 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 X	Depth (inches): N/A	
Water Table Present?	Yes X No _____	Depth (inches): 2	
Saturation Present? (includes capillary fringe)	Yes X No _____	Depth (inches): Surface	Wetland Hydrology Present? Yes X No _____

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

Remarks:

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

Sampling Point: Wbar 002 f_w

Tree Stratum (Plot size: 30 x 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	35	Y	FAC
2. Liquidambar styraciflua	25	Y	FAC
3.			
4.			
5.			
6.			
7.			

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

Sapling/Shrub Stratum (Plot size: 30 x 30 ft)			
1. Liquidambar styraciflua	10	Y	FAC
2. Acer rubrum	5	Y	FAC
3. Pinus strobus	5	Y	FACU
4.			
5.			
6.			
7.			
8.			
9.			

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

Herb Stratum (Plot size: 30 x 30 ft)			
1. none			OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			

0 = Total Cover
50% of total cover: _____   20% of total cover: _____

Woody Vine Stratum (Plot size: 30 x 30 ft)			
1. none			
2.			
3.			
4.			
5.			

0 = Total Cover
50% of total cover: 0   20% of total cover: 0

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: **80** (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

X 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 X   No _____

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

sphagnum moss present

SOID

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
0-14	2.5Y 4/2	80	10YR 5/8	20	C	M	L	
14-20	2.5Y 4/1	70	10YR 5/8	30	C	M	CL	

[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)
_X_ 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)

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)
___ Red Parent Material (TF2)
___ 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: _____

Depth (inches): _____

Hydric Soil Present? Yes _X_ No _____

Remarks:

Wetland data point wbar002f_w facing south.

Wetland data point wbar002f_w facing north.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: __ACP__   City/County: __Bath__   Sampling Date: __3/15/16__

Applicant/Owner: __Dominion__   State: __VA__   Sampling Point: __wbar 002_u__

Investigator(s): __J Benton__   Section, Township, Range: __N/A__

Landform (hillslope, terrace, etc.): __hillslope__   Local relief (concave, convex, none): __Concave__   Slope (%): __2-4__

Subregion (LRR or MLRA): __LRR N__   Lat: __38.11591__   Long: __-79.49706__   Datum: __WGS-84__

Soil Map Unit Name: __Nicelytown silt loam, 3-8% slopes__   NWI classification: __N/A__

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

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

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

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

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

Remarks:

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 __X__	Depth (inches): __N/A__	
Water Table Present?	Yes _____	No __X__	Depth (inches): __>20__	
Saturation Present? (includes capillary fringe)	Yes _____	No __X__	Depth (inches): __>20__	Wetland Hydrology Present? Yes _____ No __X__

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

Remarks:

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

Sampling Point: Wbar002-u

Tree Stratum (Plot size: 30 x 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	25	Y	FAC
2. Carya ovata	20	Y	FACU
3. Quercus alba	15	Y	FACU
4. Pinus strobus	15	Y	FACU
5.			
6.			
7.			

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

Sapling/Shrub Stratum (Plot size: 30 x 30 ft)			
1. Pinus strobus	10	Y	FACU
2. Acer rubrum	5	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			

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

Herb Stratum (Plot size: 30 x 30 ft)			
1. Dendrolycopodium obscurum	10	Y	FACU
2. Fragaria virginiana	5	Y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			

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

Woody Vine Stratum (Plot size: 30 x 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: 3 (A)

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	35	x 3 =	105
FACU species	75	x 4 =	300
UPL species	0	x 5 =	0
Column Totals:	110	(A)	405 (B)

Prevalence Index = B/A = 3.68

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 X

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

SOIL

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
0-8	10yR 3/3	100					L	
0-16	10yR 5/6	100					L	
16-20	10yR 6/8	100					CL	

[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)

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)
- Red Parent Material (TF2)
- 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: _____

Depth (inches): _____

Hydric Soil Present?   Yes _____   No X

Remarks:

Upland data point wbar002_u facing south.

Upland data point wbar002_u facing north.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline   City/County: Bath County   Sampling Date: 6/13/2016

Applicant/Owner: DOMINION   State: VA   Sampling Point: wbaz004e_w

Investigator(s): Team Z   Section, Township, Range: No PLSS in this area

Landform (hillslope, terrace, etc.): Hillslope   Local relief (concave, convex, none): _____   Slope (%): 3

Subregion (LRR or MLRA): S   Lat: 38.12085308   Long: -79.50695647   Datum: WGS 1984

Soil Map Unit Name: Purdy silty clay loam, 0 to 3 percent slopes   NWI classification: PEM

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

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

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

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

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

Remarks:
This is a small, culverted PEM wetland area.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Field Observations:

Surface Water Present?	Yes ____	No ✔	Depth (inches): _____	
Water Table Present?	Yes ____	No ✔	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes ✔	No ____	Depth (inches): 3	**Wetland Hydrology Present? Yes ✔ No_____**

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: wbaz004e_w

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *none*	0		
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover: 0 20% of total cover: 0			

Sapling/Shrub Stratum (Plot size: 15)			
1. *none*	0		
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover: 0 20% of total cover: 0			

Herb Stratum (Plot size: 5)			
1. *Juncus effusus*	50	Yes	FACW
2. *Scirpus atrovirens*	30	Yes	OBL
3. *Carex vulpinoidea*	10	No	OBL
4. *Persicaria maculosa*	10	No	FACW
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: 30)			
1. *none*	0		
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	40	x 1 = 40
FACW species	60	x 2 = 120
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	100 (A)	160 (B)

Prevalence Index = B/A = 1.6

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.)

SOIL   Sampling Point: <u>wbaz004e_w</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					SICL	
2-20	10YR 5/2	50	10YR 5/6	50	C	PL/M	SICL	

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

Hydric Soil Indicators: **Indicators for Problematic Hydric Soils[3]:**

___ Histosol (A1)	___ Dark Surface (S7)	___ 2 cm Muck (A10) **(MLRA 147)**
___ Histic Epipedon (A2)	___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Thin Dark Surface (S9) **(MLRA 147, 148)**	**(MLRA 147, 148)**
___ Hydrogen Sulfide (A4)	___ Loamy Gleyed Matrix (F2)	___ Piedmont Floodplain Soils (F19)
___ Stratified Layers (A5)	✔ Depleted Matrix (F3)	**(MLRA 136, 147)**
___ 2 cm Muck (A10) **(LRR N)**	___ Redox Dark Surface (F6)	___ Very Shallow Dark Surface (TF12)
___ Depleted Below Dark Surface (A11)	___ Depleted Dark Surface (F7)	___ Other (Explain in Remarks)
___ Thick Dark Surface (A12)	___ Redox Depressions (F8)	
___ Sandy Mucky Mineral (S1) **(LRR N,**	___ Iron-Manganese Masses (F12) **(LRR N,**	
MLRA 147, 148)	**MLRA 136)**	
___ Sandy Gleyed Matrix (S4)	___ Umbric Surface (F13) **(MLRA 136, 122)**	[3]Indicators of hydrophytic vegetation and
___ Sandy Redox (S5)	___ Piedmont Floodplain Soils (F19) **(MLRA 148)**	wetland hydrology must be present,
___ Stripped Matrix (S6)	___ Red Parent Material (F21) **(MLRA 127, 147)**	unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____   **Hydric Soil Present?   Yes __✔__   No _____**

Remarks:

Wetland data point WBAZ004e_w facing south, culvert

Wetland data point WBAZ004e_w facing north

Wetland data point WBAZ004e_w facing south

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline   City/County: Bath County   Sampling Date: 6/13/2016

Applicant/Owner: DOMINION   State: VA   Sampling Point: wbaz004_u

Investigator(s): Team Z   Section, Township, Range: No PLSS in this area

Landform (hillslope, terrace, etc.): Floodplain   Local relief (concave, convex, none): _____   Slope (%): 3

Subregion (LRR or MLRA): S   Lat: 38.12082931   Long: -79.50701337   Datum: WGS 1984

Soil Map Unit Name: Purdy silty clay loam, 0 to 3 percent slopes   NWI classification: UPL

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 is an upland area associated with wbaz004.

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:

Remarks:

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

Sampling Point: wbaz004_u

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *none*	0		
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling/Shrub Stratum (Plot size: 15)			
1. *none*	0		
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 5)			
1. *Poa pratensis*	80	Yes	FACU
2. *Trifolium repens*	10	No	FACU
3. *Plantago lanceolata*	10	No	UPL
4.			
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: 30)			
1. *none*	0		
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test worksheet:

Number of Dominant Species
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant
Species Across All Strata: 1 (B)

Percent of Dominant Species
That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	90	x 4 =	360
UPL species	10	x 5 =	50
Column Totals:	100 (A)		410 (B)

Prevalence Index = B/A = 4.1

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.)

SOIL   Sampling Point: <u>wbaz004_u</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 4/3	100					SICL	
3-19	10YR 5/4	100					SICL	

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

Hydric Soil Indicators: **Indicators for Problematic Hydric Soils[3]:**

___ Histosol (A1)	___ Dark Surface (S7)	___ 2 cm Muck (A10) **(MLRA 147)**
___ Histic Epipedon (A2)	___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Thin Dark Surface (S9) **(MLRA 147, 148)**	**(MLRA 147, 148)**
___ Hydrogen Sulfide (A4)	___ Loamy Gleyed Matrix (F2)	___ Piedmont Floodplain Soils (F19)
___ Stratified Layers (A5)	___ Depleted Matrix (F3)	**(MLRA 136, 147)**
___ 2 cm Muck (A10) **(LRR N)**	___ Redox Dark Surface (F6)	___ Very Shallow Dark Surface (TF12)
___ Depleted Below Dark Surface (A11)	___ Depleted Dark Surface (F7)	___ Other (Explain in Remarks)
___ Thick Dark Surface (A12)	___ Redox Depressions (F8)	
___ Sandy Mucky Mineral (S1) **(LRR N,**	___ Iron-Manganese Masses (F12) **(LRR N,**	
MLRA 147, 148)	**MLRA 136)**	
___ Sandy Gleyed Matrix (S4)	___ Umbric Surface (F13) **(MLRA 136, 122)**	[3]Indicators of hydrophytic vegetation and
___ Sandy Redox (S5)	___ Piedmont Floodplain Soils (F19) **(MLRA 148)**	wetland hydrology must be present,
___ Stripped Matrix (S6)	___ Red Parent Material (F21) **(MLRA 127, 147)**	unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____   **Hydric Soil Present?   Yes _____   No ✔___**

Remarks:

Upland data point WBAZ004_u facing west

Upland data point WBAZ004_u facing north

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline   City/County: Bath County   Sampling Date: 6/13/2016

Applicant/Owner: DOMINION   State: VA   Sampling Point: wbaz003e_w

Investigator(s): Team Z   Section, Township, Range: No PLSS in this area

Landform (hillslope, terrace, etc.): Hillslope   Local relief (concave, convex, none): _____   Slope (%): 3

Subregion (LRR or MLRA): S   Lat: 38.12045108   Long: -79.50532092   Datum: WGS 1984

Soil Map Unit Name: Wharton-Blairton complex, 8 to 15 percent slopes   NWI classification: PEM

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

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

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

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

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

Remarks:
This is a small, culverted PEM wetland area.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Field Observations:

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

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

Saturation Present? Yes ✔ No _____ Depth (inches): 3   **Wetland Hydrology Present? Yes ✔ No_____**
(includes capillary fringe)

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

Remarks:

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

Sampling Point: wbaz003e_w

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *none*	0		
2.			
3.			
4.			
5.			
6.			
7.			

0 = Total Cover
50% of total cover: 0   20% of total cover: 0

Sapling/Shrub Stratum (Plot size: 15)			
1. *none*	0		
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

0 = Total Cover
50% of total cover: 0   20% of total cover: 0

Herb Stratum (Plot size: 5)			
1. *Juncus effusus*	50	Yes	FACW
2. *Scirpus atrovirens*	30	Yes	OBL
3. *Carex vulpinoidea*	10	No	OBL
4. *Persicaria maculosa*	10	No	FACW
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: 30)			
1. *none*	0		
2.			
3.			
4.			
5.			

0 = Total Cover
50% of total cover: 0   20% of total cover: 0

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	40	x 1 =	40
FACW species	60	x 2 =	120
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		160 (B)

Prevalence Index = B/A =   1.6

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.)

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					SICL	
2-20	10YR 5/2	50	10YR 5/6	50	C	PL/M	SICL	

[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)	___ Dark Surface (S7)	___ 2 cm Muck (A10) **(MLRA 147)**
___ Histic Epipedon (A2)	___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Thin Dark Surface (S9) **(MLRA 147, 148)**	**(MLRA 147, 148)**
___ Hydrogen Sulfide (A4)	___ Loamy Gleyed Matrix (F2)	___ Piedmont Floodplain Soils (F19)
___ Stratified Layers (A5)	✔ Depleted Matrix (F3)	**(MLRA 136, 147)**
___ 2 cm Muck (A10) **(LRR N)**	___ Redox Dark Surface (F6)	___ Very Shallow Dark Surface (TF12)
___ Depleted Below Dark Surface (A11)	___ Depleted Dark Surface (F7)	___ Other (Explain in Remarks)
___ Thick Dark Surface (A12)	___ Redox Depressions (F8)	
___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**	___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**	
___ Sandy Gleyed Matrix (S4)	___ Umbric Surface (F13) **(MLRA 136, 122)**	[3]Indicators of hydrophytic vegetation and
___ Sandy Redox (S5)	___ Piedmont Floodplain Soils (F19) **(MLRA 148)**	wetland hydrology must be present,
___ Stripped Matrix (S6)	___ Red Parent Material (F21) **(MLRA 127, 147)**	unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present?   Yes ✔   No _____

Remarks:

Wetland data point WBAZ003e_w facing north

Wetland data point WBAZ003e_w facing east

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline   City/County: Bath County   Sampling Date: 6/13/2016

Applicant/Owner: DOMINION   State: VA   Sampling Point: wbaz003_u

Investigator(s): Team Z   Section, Township, Range: No PLSS in this area

Landform (hillslope, terrace, etc.): Floodplain   Local relief (concave, convex, none):   Slope (%): 3

Subregion (LRR or MLRA): S   Lat: 38.12049887   Long: -79.50538325   Datum: WGS 1984

Soil Map Unit Name: Lily-McClung-Dekalb complex, 8 to 15 percent slopes   NWI classification: UPL

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**
Hydric Soil Present?	Yes _____ No ✔	**within a Wetland?** Yes _____ No ✔
Wetland Hydrology Present?	Yes _____ No ✔	

Remarks:
This is an upland area associated with wbaz003.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Field Observations:

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:

Remarks:

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

Sampling Point: wbaz003_u

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *none*	0		
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling/Shrub Stratum (Plot size: 15)			
1. *none*	0		
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 5)			
1. *Poa pratensis*	80	Yes	FACU
2. *Trifolium repens*	10	No	FACU
3. *Plantago lanceolata*	10	No	UPL
4.			
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: 30)			
1. *none*	0		
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test worksheet:

Number of Dominant Species
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant
Species Across All Strata: 1 (B)

Percent of Dominant Species
That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	90	x 4 =	360
UPL species	10	x 5 =	50
Column Totals:	100 (A)		410 (B)

Prevalence Index = B/A = 4.1

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.)

SOIL

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 4/3	100					SICL	
3-19	10YR 5/4	100					SICL	

[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: _____

Depth (inches): _____

Hydric Soil Present?   Yes _____   No ✔

Remarks:

Upland data point WBAZ003_u facing west

Upland data point WBAZ003_u facing north

Wetland data point WBAZ003e_w facing south, culvert

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline   City/County: Bath County   Sampling Date: 6/13/2016

Applicant/Owner: DOMINION   State: VA   Sampling Point: wbaz002e_w

Investigator(s): Team Z   Section, Township, Range: No PLSS in this area

Landform (hillslope, terrace, etc.): Hillslope   Local relief (concave, convex, none): _____   Slope (%): 3

Subregion (LRR or MLRA): S   Lat: 38.12008791   Long: -79.50212536   Datum: WGS 1984

Soil Map Unit Name: Maurertown silty clay loam, 0 to 3 percent slopes, rarely flooded   NWI classification: PEM

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

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

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

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

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

Remarks:
This is a moderately large PEM NWI wetland area.

HYDROLOGY

Wetland Hydrology Indicators:

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

___ Surface Water (A1)	___ True Aquatic Plants (B14)	___ Surface Soil Cracks (B6)
___ High Water Table (A2)	___ Hydrogen Sulfide Odor (C1)	___ Sparsely Vegetated Concave Surface (B8)
✔ Saturation (A3)	___ Oxidized Rhizospheres on Living Roots (C3)	___ Drainage Patterns (B10)
___ Water Marks (B1)	___ Presence of Reduced Iron (C4)	___ Moss Trim Lines (B16)
___ Sediment Deposits (B2)	___ Recent Iron Reduction in Tilled Soils (C6)	___ Dry-Season Water Table (C2)
___ Drift Deposits (B3)	___ Thin Muck Surface (C7)	___ Crayfish Burrows (C8)
___ Algal Mat or Crust (B4)	___ Other (Explain in Remarks)	___ Saturation Visible on Aerial Imagery (C9)
___ Iron Deposits (B5)		___ Stunted or Stressed Plants (D1)
___ Inundation Visible on Aerial Imagery (B7)		___ Geomorphic Position (D2)
___ Water-Stained Leaves (B9)		___ Shallow Aquitard (D3)
___ Aquatic Fauna (B13)		___ Microtopographic Relief (D4)
		___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No __✔__ Depth (inches): _____		
Water Table Present? Yes _____ No __✔__ Depth (inches): _____		
Saturation Present? Yes __✔__ No _____ Depth (inches): 3	**Wetland Hydrology Present? Yes __✔__ No _____**	
(includes capillary fringe)		

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

Remarks:

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

Sampling Point: wbaz002e_w

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *none*	0		
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling/Shrub Stratum (Plot size: 15)			
1. *none*	0		
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 5)			
1. *Juncus effusus*	50	Yes	FACW
2. *Scirpus atrovirens*	30	Yes	OBL
3. *Carex vulpinoidea*	10	No	OBL
4. *Persicaria maculosa*	10	No	FACW
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: 30)			
1. *none*	0		
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	40	x 1 = 40
FACW species	60	x 2 = 120
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	100 (A)	160 (B)

Prevalence Index = B/A = 1.6

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.)

SOIL

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					SICL	
2-20	10YR 5/2	50	10YR 5/6	50	C	PL/M	SICL	

[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: _____

   Depth (inches): _____

Hydric Soil Present?   Yes __✔__   No _____

Remarks:

Wetland data point WBAZ002e_w facing north

Wetland data point WBAZ002e_w facing west

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Atlantic Coast Pipeline City/County: Bath County Sampling Date: 6/13/2016

Applicant/Owner: DOMINION State: VA Sampling Point: wbaz002_u

Investigator(s): Team Z Section, Township, Range: No PLSS in this area

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): _____ Slope (%): 3

Subregion (LRR or MLRA): S Lat: 38.12001742 Long: -79.50218455 Datum: WGS 1984

Soil Map Unit Name: Gilpin silt loam, 8 to 15 percent slopes NWI classification: UPL

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 is an upland area associated with wbaz002.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Field Observations:

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:

Remarks:

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

Sampling Point: wbaz002_u

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *none*	0		
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Sapling/Shrub Stratum (Plot size: 15)			
1. *none*	0		
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Herb Stratum (Plot size: 5)			
1. *Poa pratensis*	80	Yes	FACU
2. *Trifolium repens*	10	No	FACU
3. *Plantago lanceolata*	10	No	UPL
4.			
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: 30)			
1. *none*	0		
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		

Dominance Test worksheet:

Number of Dominant Species
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant
Species Across All Strata: 1 (B)

Percent of Dominant Species
That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	90	x 4 =	360
UPL species	10	x 5 =	50
Column Totals:	100 (A)		410 (B)

Prevalence Index = B/A = 4.1

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.)

SOIL

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 4/3	100					SICL	
3-19	10YR 5/4	100					SICL	

[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)	___ Dark Surface (S7)	___ 2 cm Muck (A10) **(MLRA 147)**
___ Histic Epipedon (A2)	___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**	___ Coast Prairie Redox (A16)
___ Black Histic (A3)	___ Thin Dark Surface (S9) **(MLRA 147, 148)**	**(MLRA 147, 148)**
___ Hydrogen Sulfide (A4)	___ Loamy Gleyed Matrix (F2)	___ Piedmont Floodplain Soils (F19)
___ Stratified Layers (A5)	___ Depleted Matrix (F3)	**(MLRA 136, 147)**
___ 2 cm Muck (A10) **(LRR N)**	___ Redox Dark Surface (F6)	___ Very Shallow Dark Surface (TF12)
___ Depleted Below Dark Surface (A11)	___ Depleted Dark Surface (F7)	___ Other (Explain in Remarks)
___ Thick Dark Surface (A12)	___ Redox Depressions (F8)	
___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**	___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**	
___ Sandy Gleyed Matrix (S4)	___ Umbric Surface (F13) **(MLRA 136, 122)**	[3]Indicators of hydrophytic vegetation and
___ Sandy Redox (S5)	___ Piedmont Floodplain Soils (F19) **(MLRA 148)**	wetland hydrology must be present,
___ Stripped Matrix (S6)	___ Red Parent Material (F21) **(MLRA 127, 147)**	unless disturbed or problematic.

Indicators for Problematic Hydric Soils[3]:

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present?   Yes _____   No ✔

Remarks:

Upland data point WBAZ002_u facing south

Upland data point WBAZ002_u facing east

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: _ACP_   City/County: _Bath_   Sampling Date: _3/15/16_

Applicant/Owner: _Dominion_   State: _VA_   Sampling Point: _Wbar001f_w_

Investigator(s): _JBenton_   Section, Township, Range: _N/A_

Landform (hillslope, terrace, etc.): _headwater_   Local relief (concave, convex, none): _concave_   Slope (%): _2-4_

Subregion (LRR or MLRA): _LRRN_   Lat: _38.12028_   Long: _-79.49423_   Datum: _WGS-84_

Soil Map Unit Name: _Atkins silt loam, 0 to 3 % slopes, occasionally flooded_   NWI classification: _PFO_

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed?   Are "Normal Circumstances" present? Yes _X_ No ____

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

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

Hydrophytic Vegetation Present? Yes _X_ No ____	Is the Sampled Area within a Wetland?	Yes _X_ No ____
Hydric Soil Present? Yes _X_ No ____		
Wetland Hydrology Present? Yes _X_ No ____		

Remarks:
NCWAM: Headwater forest.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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)
_X_ Microtopographic Relief (D4)
_X_ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No _X_	Depth (inches): _N/A_	
Water Table Present?	Yes _X_	No ____	Depth (inches): _2_	
Saturation Present? (includes capillary fringe)	Yes _X_	No ____	Depth (inches): _surface_	Wetland Hydrology Present? Yes _X_ No ____

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

Remarks:
Buttressed trees present

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

Tree Stratum (Plot size: 30 x 30 ft)

	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	35	Y	FAC
2. Liquidambar styraciflua	20	Y	FAC
3. Betula nigra	15	Y	FACW
4.			
5.			
6.			
7.			

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

Sapling/Shrub Stratum (Plot size: 30 x 30 ft)

1. Acer rubrum	5	Y	FAC
2. Liquidambar styraciflua	5	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			

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

Herb Stratum (Plot size: 30 x 30 ft)

1. Rubus argutus	5	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			

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

Woody Vine Stratum (Plot size: 30 x 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: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 85.7 (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
X 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 X   No _____

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

Sphagnum moss present

SOIL

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 2/2	100					L	
6-14	2.5Y 3/1	90	10YR 5/8	10	C	M	L	
14-20	2.5Y 4/2	80	10YR 6/8	20	C	M	CL	

[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)
- X Depleted Matrix (F3)
- X 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)

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)
- __ Red Parent Material (TF2)
- __ 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: _____

Depth (inches): _____

Hydric Soil Present?   Yes X   No _____

Remarks:

Wetland data point wbar001f_w facing north.

Wetland data point wbar001f_w facing south.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: _ACP_ City/County: _Bath_ Sampling Date: _3/15/16_
Applicant/Owner: _Dominion_ State: _VA_ Sampling Point: _Wbar001_u_
Investigator(s): _JBenton_ Section, Township, Range: _N/A_
Landform (hillslope, terrace, etc.): _hillslope_ Local relief (concave, convex, none): _Concave_ Slope (%): _2-4_
Subregion (LRR or MLRA): _LRRN_ Lat: _38.12024_ Long: _-79.49419_ Datum: _WGS-84_
Soil Map Unit Name: _Atkins silt loam, 0-3% slopes, occ. flooded_ NWI classification: _N/A_

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

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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 _X_	Depth (inches): _N/A_	
Water Table Present?	Yes _X_ No _____	Depth (inches): _6_	
Saturation Present? (includes capillary fringe)	Yes _X_ No _____	Depth (inches): _Surface_	Wetland Hydrology Present? Yes _X_ No _____

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

Remarks:

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

Tree Stratum (Plot size: 30 x 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Carya ovata	25	Y	FACU
2. Liquidambar styraciflua	20	Y	FAC
3. Betula nigra	15	Y	FACW
4. Pinus strobus	15	Y	FACU
5.			
6.			
7.			

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

Sapling/Shrub Stratum (Plot size: 30 x 30 H)			
1. Quercus alba	10	Y	FACU
2. Liquidambar styraciflua	5	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			

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

Herb Stratum (Plot size: 30 x 30 H)			
1. Rubus argutus	5	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			

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

Woody Vine Stratum (Plot size: 30 x 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: **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	0	x 1 =	0
FACW species	15	x 2 =	30
FAC species	30	x 3 =	90
FACU species	55	x 4 =	220
UPL species	0	x 5 =	0
Column Totals:	100 (A)		340 (B)

Prevalence Index = B/A = 3.4

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 __X__

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

SOIL

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 2/2	100					L	
6-12	2.5Y 4/3	85	10YR 5/8	15	C	M	L	
12-20	2.5Y 4/4	60	10YR 5/8	40	C	M	CL	

[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)

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)
- __ Red Parent Material (TF2)
- __ 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: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No __X__

Remarks:

Upland data point wbar001_u facing north.

Upland data point wbar001_u facing south.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: _ACP_   City/County: _Bath_   Sampling Date: _3/23/16_

Applicant/Owner: _Dominion_   State: _VA_   Sampling Point: _wbar007fw_

Investigator(s): _J Benton_   Section, Township, Range: _N/A_

Landform (hillslope, terrace, etc.): _Floodplain_   Local relief (concave, convex, none): _Concave_   Slope (%): _4_

Subregion (LRR or MLRA): _LRR N_   Lat: _38.14696_   Long: _- 79.47292_   Datum: _WGS-84_

Soil Map Unit Name: _McClung - Watahala - Dekalb complex 8-15% slopes_   NWI classification: _PFO_

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

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

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

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

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

Remarks:

NCWAM: headwater forest

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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 _X_	Depth (inches): _N/A_	
Water Table Present?	Yes _X_	No _____	Depth (inches): _14_	
Saturation Present? (includes capillary fringe)	Yes _X_	No _____	Depth (inches): _6_	Wetland Hydrology Present? Yes _X_ No _____

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

Remarks:

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

Tree Stratum (Plot size: 30×30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	30	Y	FAC
2. Quercus alba	20	Y	FACU
3.			
4.			
5.			
6.			
7.			

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

Sapling/Shrub Stratum (Plot size: 30×30 ft)			
1. Fraxinus pennsylvanica	10	Y	FACW
2. Acer rubrum	5	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			

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

Herb Stratum (Plot size: 30×30ft)			
1. Rubus argutus	10	Y	FACU
2. Viola sororia	5	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			

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

Woody Vine Stratum (Plot size: 30×30ft)			
1. Smilax rotundifolia	5	Y	FAC
2.			
3.			
4.			
5.			

50% of total cover: 2.5   5 = Total Cover   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

_X_ 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 X No _____

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

SOIL

Sampling Point: Wbar 007f_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
0-8	2.5y 4/2	95	7.5yR 4/6	5	C	M	L	
8-20	2.5y 5/4	90	7.5yR 5/8	10	C	M	CL	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)
X 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)

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)
___ Red Parent Material (TF2)
___ 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: _____
Depth (inches): _____

Hydric Soil Present?   Yes __X__   No _____

Remarks:

US Army Corps of Engineers

Eastern Mountains and Piedmont – Version 2.0

Wetland data point wbar007f_w facing east.

Wetland data point wbar007f_w facing west.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: ACP   City/County: Bath   Sampling Date: 3/23/16
Applicant/Owner: Dominion   State: VA   Sampling Point: wbar007-a
Investigator(s): JBenton   Section, Township, Range: N/A
Landform (hillslope, terrace, etc.): hillslope   Local relief (concave, convex, none): Concave   Slope (%): 6
Subregion (LRR or MLRA): LRR N   Lat: 38.14651   Long: -79.47211   Datum: WGS-84
Soil Map Unit Name: Lily-McClung-DeKalb complex, 8-15% slopes   NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed?   Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic?   (If needed, explain any answers in Remarks.)

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches): N/A	
Water Table Present?	Yes _____	No X	Depth (inches): 720	
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches): >20	Wetland Hydrology Present? Yes _____ No X

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

Remarks:

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

Tree Stratum (Plot size: 30 x 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	20	Y	FAC
2. Quercus alba	20	Y	FACU
3. Pinus strobus	15	Y	FACU
4. Quercus rubra	15	Y	FACU
5.			
6.			
7.			

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

Sapling/Shrub Stratum (Plot size: 30 x 30 ft)			
1. Pinus Strobus	10	Y	FACU
2. Quercus alba	5	Y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			

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

Herb Stratum (Plot size: 30 x 30 ft)			
1. Polystichum acrostichoides	5	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			

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

Woody Vine Stratum (Plot size: 30 x 30 ft)			
1. Vitis 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:	2	(A)
Total Number of Dominant Species Across All Strata:	8	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	25	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	25	x 3 =	75
FACU species	70	x 4 =	280
UPL species	0	x 5 =	0
Column Totals:	95 (A)		355 (B)

Prevalence Index = B/A = 3.7

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 X

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

SOIL

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
0-12	10YR 5/6	100					SiL	w/ gravel
12-20	10YR 5/8	100					SiCL	

[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)

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)
- __ Red Parent Material (TF2)
- __ 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: _____

Depth (inches): _____

Hydric Soil Present?   Yes _____   No _X_

Remarks:

Upland data point wbar007_u facing east.

Upland data point wbar007_u facing west.