WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Danville, Pittsylvania C... Sampling Date: 2018-July-28
Applicant/Owner: NextEra State: Virginia Sampling Point: W-G18-11_UPL-1
Investigator(s): Troy Savage, AJW MCS Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 1 to 10
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.6506043 Long: -79.5228385 Datum: WGS84
Soil Map Unit Name: 23C 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 ✓		
Hydric Soil Present?	Yes ____ No ✓		
Wetland Hydrology Present?	Yes ____ No ✓	Is the Sampled Area within a Wetland?	Yes ____ No ✓

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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: W-G18-11_UPL-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fagus grandifolia*	45	Yes	FACU
2. *Liriodendron tulipifera*	30	Yes	FACU
3. *Acer rubrum*	20	No	FAC
4. *Quercus alba*	5	No	FACU
5. *Carya glabra*	5	No	FACU
6.			
7.			
	105	= Total Cover	
50% of total cover: 52.5	20% of total cover:	21	
Sapling/Shrub Stratum (Plot size: 10x5)			
1. *Fagus grandifolia*	20	Yes	FACU
2. *Acer rubrum*	15	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	35	= Total Cover	
50% of total cover: 17.5	20% of total cover:	7	
Herb Stratum (Plot size: 5')			
1. *Pyrola americana*	5	Yes	FAC
2. *Fagus grandifolia*	5	Yes	FACU
3. *Parthenocissus quinquefolia*	2	No	FACU
4. *Acer rubrum*	2	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	14	= Total Cover	
50% of total cover: 7	20% of total cover:	2.8	
Woody Vine Stratum (Plot size: 20x10)			
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:	6	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	33.3	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	42	x 3 =	126
FACU species	112	x 4 =	448
UPL species	0	x 5 =	0
Column Totals	154 (A)		574 (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 vines – 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: W-G18-11_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 5	10YR 4/4	100					Silty Clay Loam	
5 - 18	10YR 5/6	100					Silty Clay Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot
South

Photo of Sample Plot
West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Danville, Pittsylvania C... Sampling Date: 2018-July-26
Applicant/Owner: NextEra State: Virginia Sampling Point: W-A18-198_PEM-1
Investigator(s): Laura Giese, Simon King Section, Township, Range:
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 1 to 3
Subregion (LRR or MLRA): Lat: 36.6518597 Long: -79.5222192 Datum: WGS84
Soil Map Unit Name: NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Covertype is PEM. Area is wetland, all three wetland parameters are present.

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):	8	Wetland Hydrology Present?	Yes ✓ No ____
Saturation Present? (includes capillary fringe)	Yes ✓ No ____	Depth (inches):	0		

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

Remarks:

A positive indication of wetland hydrology was observed (at least one primary indicator).

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

Sampling Point: W-A18-198_PEM-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
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.			
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. *Impatiens capensis*	35	Yes	FACW
2. *Symphyotrichum lateriflorum*	25	Yes	FACW
3. *Microstegium vimineum*	15	No	FAC
4. *Glechoma hederacea*	15	No	FACU
5. *Amphicarpaea bracteata*	10	No	FAC
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.			
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	0	x 1 =	0
FACW species	60	x 2 =	120
FAC species	25	x 3 =	75
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column Totals	100	(A)	255 (B)
Prevalence Index = B/A =	2.6		

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 vines – 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.)

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

SOIL

Sampling Point: W-A18-198_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 7	10YR 4/1	95	7.5YR 4/6	5	C	M/PL	Sandy Loam	
7 - 28	2.5Y 5/1	95	7.5YR 4/6	5	C	M/PL	Sandy Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

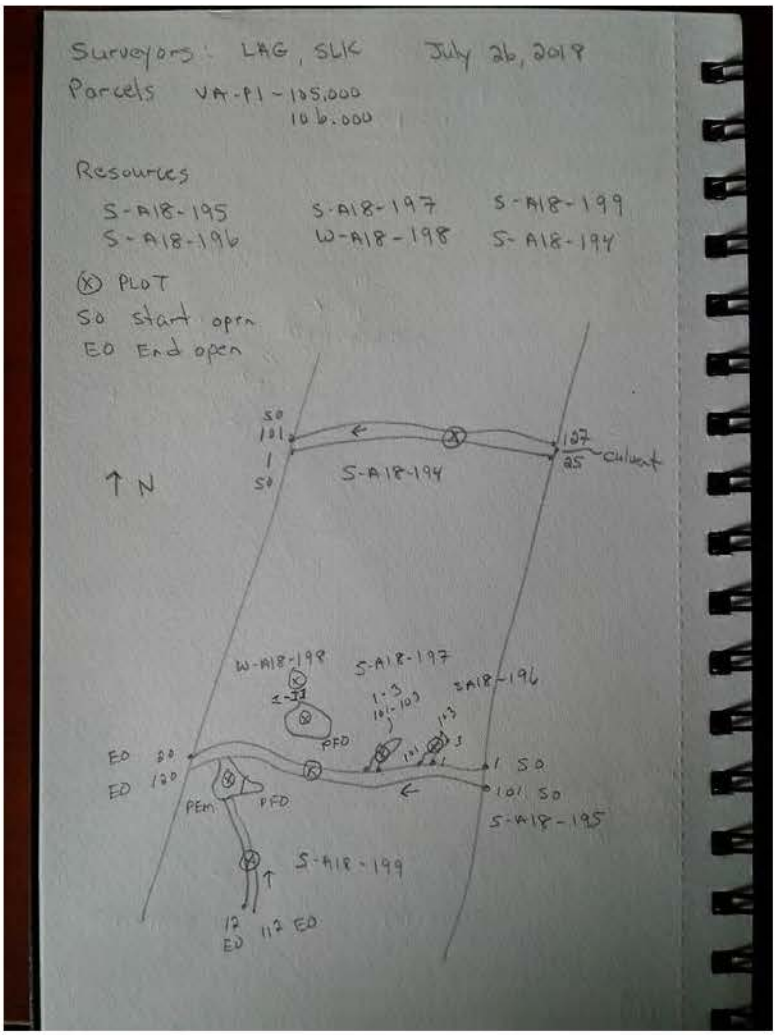
Photo of Sample Plot
North

Photo of Sample Plot
East

Photo of Sample Plot
South

Photo of Sample Plot
West

Photo of Sample Plot Sketch



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Danville, Pittsylvania C... Sampling Date: 2018-July-26
Applicant/Owner: NextEra State: Virginia Sampling Point: W-A18-198_PFO-1
Investigator(s): Laura Giese, Simon King Section, Township, Range:
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 1 to 3
Subregion (LRR or MLRA): Lat: 36.6519248 Long: -79.5217559 Datum: WGS84
Soil Map Unit Name: NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Covertype is PFO. Area is wetland, all three wetland parameters are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Sparsely Vegetated Concave Surface (B8)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
✓ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____ No ✓	Depth (inches):		
Water Table Present?	Yes ✓ No ____	Depth (inches):	10	Wetland Hydrology Present? Yes ✓ No ____
Saturation Present? (includes capillary fringe)	Yes ✓ No ____	Depth (inches):	8	

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

Remarks:

A positive indication of wetland hydrology was observed (at least one primary indicator).

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

Sampling Point: W-A18-198_PFO-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	20	Yes	FAC
2. *Liquidambar styraciflua*	15	Yes	FAC
3. *Liriodendron tulipifera*	15	Yes	FACU
4. *Fraxinus pennsylvanica*	10	No	FACW
5.			
6.			
7.			
	60	= Total Cover	
50% of total cover: 30	20% of total cover:	12	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Liquidambar styraciflua*	15	Yes	FAC
2. *Cornus racemosa*	10	Yes	FAC
3. *Lindera benzoin*	10	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
	35	= Total Cover	
50% of total cover: 17.5	20% of total cover:	7	
Herb Stratum (Plot size: 5)			
1. *Microstegium vimineum*	50	Yes	FAC
2. *Dryopteris carthusiana*	20	Yes	FAC
3. *Solidago sp.*		No	NI
4.			
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)			
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:	7	(A)
Total Number of Dominant Species Across All Strata:	8	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	87.5	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	140	x 3 =	420
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column Totals	165 (A)		500 (B)
Prevalence Index = B/A =	3		

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 vines – 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.)

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

SOIL

Sampling Point: W-A18-198_PFO-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 4	10YR 4/2	95	10YR 5/8	5	C	M	Sandy Loam	
4 - 8	2.5Y 6/3	80	10YR 5/8	20	C	M	Sand	
8 - 28	2.5Y 6/1	90	7.5YR 5/8	10	C	M/PL	Sandy Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

A positive indication of hydric soil was observed.

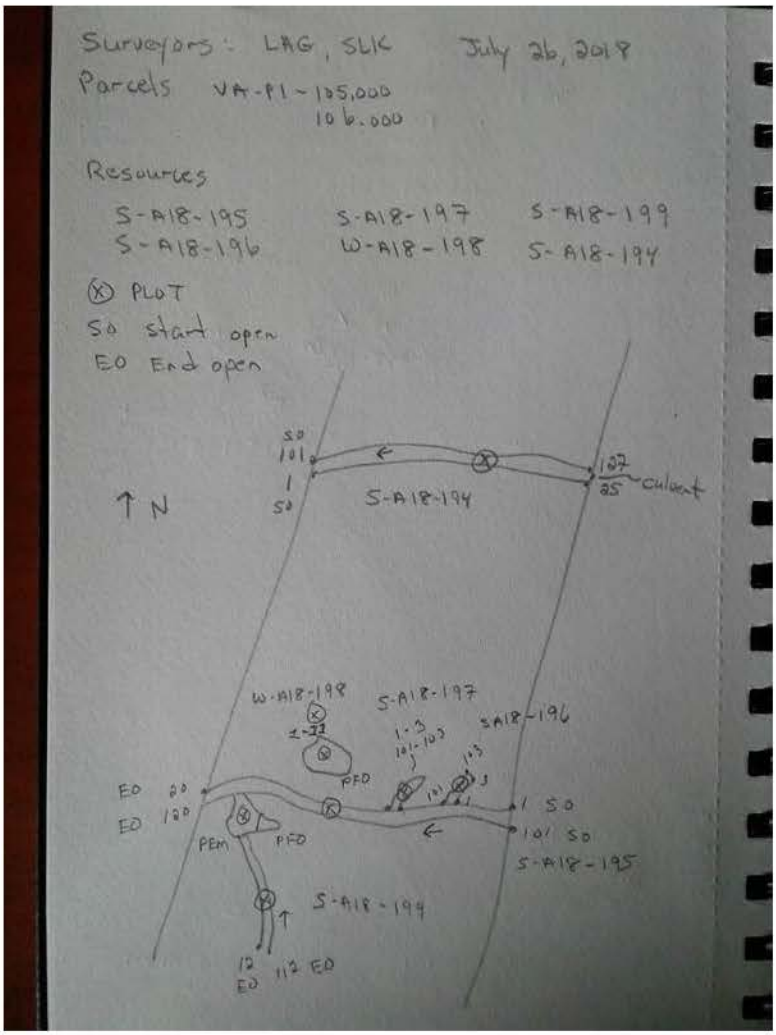
Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

Photo of Sample Plot Sketch



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Danville, Pittsylvania C... Sampling Date: 2018-July-26
Applicant/Owner: NextEra State: Virginia Sampling Point: W-A18-198_UPL-1
Investigator(s): Laura Giese, Simon King Section, Township, Range:
Landform (hillslope, terrace, etc.): Back slope Local relief (concave, convex, none): Convex Slope (%): 5 to 10
Subregion (LRR or MLRA): Lat: 36.6521095 Long: -79.5217622 Datum: WGS84
Soil Map Unit Name: NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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):	**Wetland Hydrology Present?** Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:

No positive indication of wetland hydrology was observed.

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

Sampling Point: W-A18-198_UPL-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus virginiana*	30	Yes	UPL
2. *Liriodendron tulipifera*	10	Yes	FACU
3. *Liquidambar styraciflua*	10	Yes	FAC
4.			
5.			
6.			
7.			
	50	= Total Cover	
50% of total cover: 25	20% of total cover:		10
Sapling/Shrub Stratum (Plot size: 15)			
1. *Corylus americana*	10	Yes	FACU
2. *Fagus grandifolia*	10	Yes	FACU
3. *Liquidambar styraciflua*	18	Percent cover cannot be greater than a previous species	FAC
4. *Acer rubrum*	10	Yes	FAC
5.			
6.			
7.			
8.			
9.			
	48	= Total Cover	
50% of total cover: 24	20% of total cover:		9.600000000000001
Herb Stratum (Plot size: 5)			
1. *Microstegium vimineum*	25	Yes	FAC
2. *Asplenium platyneuron*	5	No	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	30	= Total Cover	
50% of total cover: 15	20% of total cover:		6
Woody Vine Stratum (Plot size: 30)			
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:	3	(A)
Total Number of Dominant Species Across All Strata:	7	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	42.9	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	63	x 3 =	189
FACU species	35	x 4 =	140
UPL species	30	x 5 =	150
Column Totals	128	(A)	479 (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 vines – 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.)

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

SOIL

Sampling Point: W-A18-198_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	10YR 5/6	100					Sandy Loam	
6 - 18	10YR 6/6	100					Loamy Sand	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? **Yes** ☐ **No** ☑

Remarks:

No positive indication of hydric soils was observed.

Photo of Sample Plot North

Photo of Sample Plot East

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Danville, Pittsylvania C… Sampling Date: 2018-June-25
Applicant/Owner: NextEra State: Virginia Sampling Point: COPIED TO TRC W-C18-100_PFO_1
Investigator(s): Jenn Favela, ESN, JSF, BAC Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 10 to 20
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.6472669 Long: -79.5252816 Datum: WGS84
Soil Map Unit Name: 23C 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 ____		
Hydric Soil Present?	Yes ✓ No ____		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ✓ No ____

Remarks:

Covertype is PFO. Area is wetland, all three wetland parameters are present.

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):	1
Water Table Present?	Yes ✓ No ____	Depth (inches):	1
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.

Sampling Point: COPIED TO TRC W-C18-100_PFO_1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	50	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	50	= Total Cover	
50% of total cover: 25	20% of total cover:	10	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
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. *Leersia oryzoides*	35	Yes	OBL
2.			
3.			
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)			
1. *Smilax rotundifolia*	30	Yes	FAC
2.			
3.			
4.			
5.			
	30	= Total Cover	
50% of total cover: 15	20% of total cover:	6	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	3	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	35	x 1 =	35
FACW species	0	x 2 =	0
FAC species	80	x 3 =	240
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	115	(A)	275 (B)
Prevalence Index = B/A =	2.4		

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 vines – 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: COPIED TO TRC W-C18-100_PFO_1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 3	2.5Y 4/2	93	10YR 5/8	7	C	M/PL	Loam	
3 - 8	2.5Y 5/2	100					Sandy Silt Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Danville, Pittsylvania C… Sampling Date: 2018-June-25
Applicant/Owner: NextEra State: Virginia Sampling Point: W-C18-100_PFO-1
Investigator(s): Jenn Favela, ESN, JSF, BAC Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 10 to 20
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.6472669 Long: -79.5252816 Datum: WGS84
Soil Map Unit Name: 23C 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 ____		
Hydric Soil Present?	Yes ✓ No ____		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ✓ No ____

Remarks:

Covertype is PFO. Area is wetland, all three wetland parameters are present.

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):	1
Water Table Present?	Yes ✓ No ____	Depth (inches):	1
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.

Sampling Point: W-C18-100_PFO-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	50	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	50	= Total Cover	
50% of total cover: 25	20% of total cover:	10	

Sapling/Shrub Stratum (Plot size: 15)			
1.			
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. *Leersia oryzoides*	35	Yes	OBL
2.			
3.			
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)			
1. *Smilax rotundifolia*	30	Yes	FAC
2.			
3.			
4.			
5.			
	30	= Total Cover	
50% of total cover: 15	20% of total cover:	6	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	3	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	35	x 1 =	35
FACW species	0	x 2 =	0
FAC species	80	x 3 =	240
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	115	(A)	275 (B)
Prevalence Index = B/A =	2.4		

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 vines – 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: W-C18-100_PFO-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 3	2.5Y 4/2	93	10YR 5/8	7	C	M/PL	Loam	
3 - 8	2.5Y 5/2	100					Sandy Silt Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-June-25
Applicant/Owner: NextEra State: Sampling Point: W-C18-100_UPL-1
Investigator(s): Jenn Favela, ESN, JSF, BAC Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 10 to 15
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.647508 Long: -79.5252505 Datum: WGS84
Soil Map Unit Name: 23C 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 ____		
Hydric Soil Present?	Yes ____ No ✓		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ____ No ✓

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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: W-C18-100_UPL-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	50	Yes	FAC
2. *Liquidambar styraciflua*	20	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	70	= Total Cover	
50% of total cover: 35	20% of total cover:	14	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
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. *Microstegium vimineum*	40	Yes	FAC
2. *Smilax rotundifolia*	30	Yes	FAC
3. *Toxicodendron radicans*	25	Yes	FAC
4. *Parthenocissus quinquefolia*	8	No	FACU
5. *Asteracae*	3	No	NI
6. *Quercus phellos*	1	No	FAC
7.			
8.			
9.			
10.			
11.			
	107	= Total Cover	
50% of total cover: 53.5	20% of total cover:	21.4	
Woody Vine Stratum (Plot size: 30)			
1. *Smilax rotundifolia*	7	Yes	FAC
2. *Toxicodendron radicans*	5	Yes	FAC
3.			
4.			
5.			
	12	= Total Cover	
50% of total cover: 6	20% of total cover:	2.4000000000000004	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	7	(A)
Total Number of Dominant Species Across All Strata:	7	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	178	x 3 =	534
FACU species	8	x 4 =	32
UPL species	0	x 5 =	0
Column Totals	186 (A)		566 (B)
Prevalence Index = B/A =	3		

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 vines – 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: W-C18-100_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 1	2.5Y 5/3	97	5YR 4/6	3	C	PL	Loam	
1 - 10	2.5Y 5/3	100					Clay Loam	
10 - 12	2.5Y 6/4	100					Silt Loam	
12 - 18	2.5Y 5/2	99	10YR 5/8	1	C	M	Silty Clay Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? **Yes** ☐ **No** ☑

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Danville, Pittsylvania C... Sampling Date: 2018-July-27
Applicant/Owner: NextEra State: Virginia Sampling Point: W-A18-200_PSS-1
Investigator(s): Laura Giese, Simon King Section, Township, Range:
Landform (hillslope, terrace, etc.): Back slope Local relief (concave, convex, none): Concave Slope (%): 2 to 5
Subregion (LRR or MLRA): Lat: 36.645354 Long: -79.5264966 Datum: WGS84
Soil Map Unit Name: NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes _✓_ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Covertype is PSS. Area is wetland, all three wetland parameters are present.

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):	**Wetland Hydrology Present?** Yes _✓_ No ____
Saturation Present? (includes capillary fringe)	Yes ____ No _✓_	Depth (inches):	

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

Remarks:

A positive indication of wetland hydrology was observed (at least two secondary indicators). Soils very moist.

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

Sampling Point: W-A18-200_PSS-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
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. *Sambucus nigra*	30	Yes	FAC
2. *Salix nigra*	15	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	45	= Total Cover	
50% of total cover: 22.5	20% of total cover:	9	
Herb Stratum (Plot size: 5)			
1. *Symphyotrichum lanceolatum*	40	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	40	= Total Cover	
50% of total cover: 20	20% of total cover:	8	
Woody Vine Stratum (Plot size: 30)			
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:	3	(A)
Total Number of Dominant Species Across All Strata:	3	(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	40	x 2 =	80
FAC species	30	x 3 =	90
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	85	(A)	185 (B)
Prevalence Index = B/A =	2.2		

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 vines – 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.)

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

SOIL

Sampling Point: W-A18-200_PSS-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 2	10YR 3/2	100					Loam	
2 - 9	2.5Y 5/1	95	10YR 5/8	5	C	M	Sandy Loam	
9 - 20	2.5Y 5/3	90	10YR 5/8	10	C	M	Sandy Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

A positive indication of hydric soil was observed.

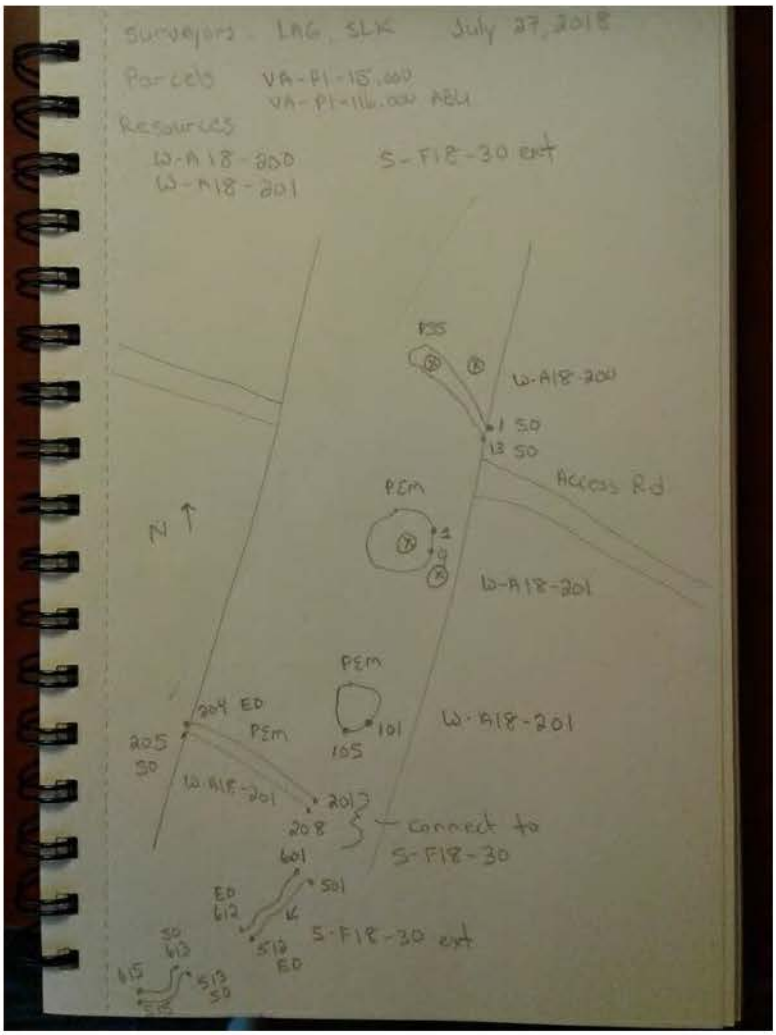
Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

Photo of Sample Plot Sketch



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Danville, Pittsylvania C... Sampling Date: 2018-July-27
Applicant/Owner: NextEra State: Virginia Sampling Point: W-A18-200_UPL-1
Investigator(s): Laura Giese, Simon King Section, Township, Range:
Landform (hillslope, terrace, etc.): Back slope Local relief (concave, convex, none): Convex Slope (%): 2 to 5
Subregion (LRR or MLRA): Lat: 36.6452154 Long: -79.5263918 Datum: WGS84
Soil Map Unit Name: NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Covertype is UPL. Area is upland based on absence of hydric soils and wetland hydrology.

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):	Wetland Hydrology Present? Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:

No positive indication of wetland hydrology was observed.

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

Sampling Point: W-A18-200_UPL-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Liquidambar styraciflua*	35	Yes	FAC
2. *Platanus occidentalis*	20	Yes	FACW
3. *Acer rubrum*	20	Yes	FAC
4.			
5.			
6.			
7.			
	75	= Total Cover	
50% of total cover: 37.5	20% of total cover:	15	

Sapling/Shrub Stratum (Plot size: 15)			
1. *Liquidambar styraciflua*	15	Yes	FAC
2. *Acer rubrum*	10	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	25	= Total Cover	
50% of total cover: 12.5	20% of total cover:	5	

Herb Stratum (Plot size: 5)			
1. *Lonicera japonica*	10	Yes	FACU
2. *Rubus allegheniensis*	5	Yes	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)			
1. *Smilax rotundifolia*	5	Yes	FAC
2.			
3.			
4.			
5.			
	5	= Total Cover	
50% of total cover: 2.5	20% of total cover:	1	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	6	(A)
Total Number of Dominant Species Across All Strata:	8	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	75	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	85	x 3 =	255
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column Totals	120	(A)	355 (B)
Prevalence Index = B/A =	3		

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 vines – 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.)

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

SOIL

Sampling Point: W-A18-200_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 7	10YR 4/2	100					Sandy Loam	
7 - 14	10YR 6/6	100					Sandy Loam	
14 - 20	10YR 6/6	95	7.5YR 5/8	5	C	M	Sandy Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks:

No positive indication of hydric soils was observed.

Photo of Sample Plot North

Photo of Sample Plot East

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-June-25
Applicant/Owner: NextEra State: Sampling Point: W-C18-98_PFO-1
Investigator(s): Jen Feese, JMF, SWB, SES Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 1 to 10
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.6446714 Long: -79.5263568 Datum: WGS84
Soil Map Unit Name: 23C: Mayodan fine Sandy loam 7-15% slope 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 ____		
Hydric Soil Present?	Yes ✓ No ____		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ✓ No ____

Remarks:

Covertype is PFO. Area is wetland, all three wetland parameters are present.

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):	6	Wetland Hydrology Present? Yes ✓ No ____
Saturation Present? (includes capillary fringe)	Yes ✓ No ____	Depth (inches):	4	

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

Remarks:

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

Sampling Point: W-C18-98_PFO-1

Tree Stratum (Plot size: 5' x 40')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	50	Yes	FAC
2. *Prunus serotina*	20	Yes	FACU
3. *Carpinus caroliniana*	10	No	FAC
4.			
5.			
6.			
7.			
	80	= Total Cover	
50% of total cover: 40	20% of total cover:	16	

Sapling/Shrub Stratum (Plot size: 5' x 40')			
1. *Carpinus caroliniana*	5	Yes	FAC
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: 5)			
1. *Poaceae*	20	Yes	NI
2. *Boehmeria cylindrica*	7	Yes	FACW
3. *Quercus phellos*	1	No	FAC
4. *Acer negundo*	1	No	FAC
5. *Alnus serrulata*	1	No	OBL
6. *Microstegium vimineum*	1	No	FAC
7.			
8.			
9.			
10.			
11.			
	31	= Total Cover	
50% of total cover: 15.5	20% of total cover:	6.2	

Woody Vine Stratum (Plot size: 5' x 40')			
1. *Smilax rotundifolia*	25	Yes	FAC
2. *Lonicera japonica*	10	Yes	FACU
3.			
4.			
5.			
	35	= Total Cover	
50% of total cover: 17.5	20% of total cover:	7	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	4	(A)
Total Number of Dominant Species Across All Strata:	7	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	57.1	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	1	x 1 =	1
FACW species	7	x 2 =	14
FAC species	93	x 3 =	279
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column Totals	131	(A)	414 (B)
Prevalence Index = B/A =	3.2		

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 vines – 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.)

Unable to identify species due to the absence of distinguishing characteristics. However, due to the presence of wetland hydrology and hydric soils and the associated vegetative community, this species is assumed a FAC indicator status for the Dominance Test.

SOIL

Sampling Point: W-C18-98_PFO-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	2.5Y 5/1	93	2.5YR 3/4	7	C	M/PL	Silt Loam	
6 - 13	2.5Y 6/2	98	7.5YR 3/4	2	C	M	Sand	
13 - 15	2.5Y 6/2	70	10YR 5/8	30	C	M	Sand	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: Gravel
Depth (inches): 15

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-June-25
Applicant/Owner: NextEra State: Sampling Point: W-C18-98_UPL-1
Investigator(s): Jen Feese, JMF, SWB, SES Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 1 to 10
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.644674 Long: -79.526418 Datum: WGS84
Soil Map Unit Name: 23C: Mayodan fine Sandy loam 7-15% slope 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 ____		
Hydric Soil Present?	Yes ____ No ✓		
Wetland Hydrology Present?	Yes ____ No ✓	Is the Sampled Area within a Wetland?	Yes ____ No ✓

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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):		Wetland Hydrology Present? Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ____	Depth (inches):		

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

Remarks:

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

Sampling Point: W-C18-98_UPL-1

Tree Stratum (Plot size: 5' x 40')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Platanus occidentalis*	25	Yes	FACW
2. *Acer rubrum*	10	Yes	FAC
3. *Liquidambar styraciflua*	5	No	FAC
4.			
5.			
6.			
7.			
	40	= Total Cover	
50% of total cover: 20	20% of total cover:	8	
Sapling/Shrub Stratum (Plot size: 5' x 40')			
1. *Alnus serrulata*	15	Yes	OBL
2. *Betula nigra*	10	Yes	FACW
3. *Acer rubrum*	10	Yes	FAC
4. *Rhus copallinum*	5	No	FACU
5.			
6.			
7.			
8.			
9.			
	40	= Total Cover	
50% of total cover: 20	20% of total cover:	8	
Herb Stratum (Plot size: 5)			
1. *Rubus argutus*	25	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	25	= Total Cover	
50% of total cover: 12.5	20% of total cover:	5	
Woody Vine Stratum (Plot size: 5' x 40')			
1. *Smilax rotundifolia*	30	Yes	FAC
2. *Vitis rotundifolia*	15	Yes	FAC
3. *Lonicera japonica*	15	Yes	FACU
4. *Parthenocissus quinquefolia*	10	No	FACU
5. *Toxicodendron radicans*	10	No	FAC
	80	= Total Cover	
50% of total cover: 40	20% of total cover:	16	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	7	(A)
Total Number of Dominant Species Across All Strata:	9	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	77.8	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	15	x 1 =	15
FACW species	35	x 2 =	70
FAC species	80	x 3 =	240
FACU species	55	x 4 =	220
UPL species	0	x 5 =	0
Column Totals	185	(A)	545 (B)
Prevalence Index = B/A =	2.9		

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 vines – 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: W-C18-98_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 2	10YR 5/3	100					Loamy Sand	
2 - 7	10YR 5/4	100					Loamy Sand	
7 - 18	10YR 4/4	100					Loamy Sand	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot
South

Photo of Sample Plot
West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Danville, Pittsylvania C... Sampling Date: 2018-July-27
Applicant/Owner: NextEra State: Virginia Sampling Point: W-A18-201_PEM-1
Investigator(s): Laura Giese, Simon King Section, Township, Range:
Landform (hillslope, terrace, etc.): Back slope Local relief (concave, convex, none): Concave Slope (%): 2 to 5
Subregion (LRR or MLRA): Lat: 36.644472 Long: -79.5268516 Datum: WGS84
Soil Map Unit Name: NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Covertype is PEM. Area is wetland, all three wetland parameters are present.

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):		Wetland Hydrology Present? Yes ✓ No ____
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):		

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

Remarks:

A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

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

Sampling Point: W-A18-201_PEM-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
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.			
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. *Cyperus esculentus*	20	Yes	FACW
2. *Juncus effusus*	20	Yes	FACW
3. *Boehmeria cylindrica*	20	Yes	FACW
4. *Microstegium vimineum*	20	Yes	FAC
5. *Symphyotrichum novae-angliae*	10	No	FACW
6. *Solanum carolinense*	10	No	FACU
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.			
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:	4	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	70	x 2 =	140
FAC species	20	x 3 =	60
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals	100	(A)	240 (B)
Prevalence Index = B/A =	2.4		

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 vines – 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.)

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

SOIL

Sampling Point: W-A18-201_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 11	10YR 4/2	90	7.5YR 4/6	10	C	M/PL	Silt Loam	
11 - 20	2.5Y 5/1	85	7.5YR 4/6	15	C	M	Clay Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

A positive indication of hydric soil was observed.

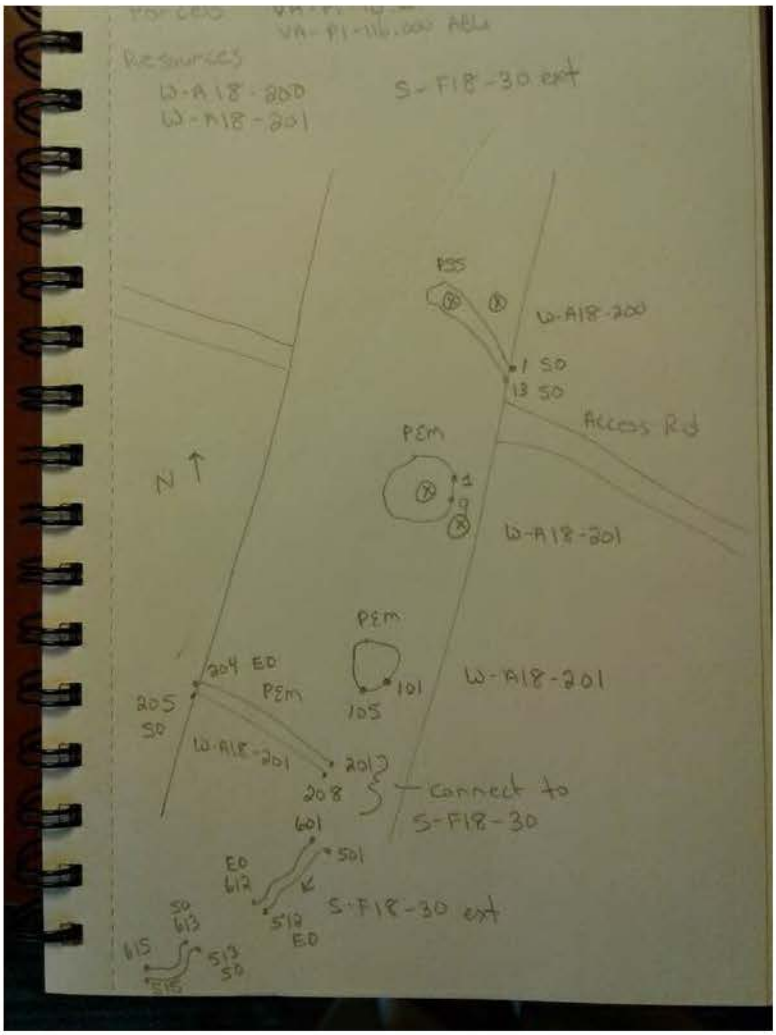
Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

Photo of Sample Plot Sketch



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Danville, Pittsylvania C... Sampling Date: 2018-July-27
Applicant/Owner: NextEra State: Virginia Sampling Point: W-A18-201_UPL-1
Investigator(s): Laura Giese, Simon King Section, Township, Range:
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): 1 to 3
Subregion (LRR or MLRA): Lat: 36.6444827 Long: -79.5267745 Datum: WGS84
Soil Map Unit Name: NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Covertype is UPL.

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:

No positive indication of wetland hydrology was observed.

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

Sampling Point: W-A18-201_UPL-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	25	Yes	FAC
2. *Betula nigra*	20	Yes	FACW
3.			
4.			
5.			
6.			
7.			
	45	= Total Cover	
50% of total cover: 22.5	20% of total cover:	9	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Salix nigra*	20	Yes	OBL
2. *Juniperus virginiana*	10	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	30	= Total Cover	
50% of total cover: 15	20% of total cover:	6	
Herb Stratum (Plot size: 5)			
1. *Microstegium vimineum*	15	Yes	FAC
2.			
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)			
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	20	x 1 =	20
FACW species	20	x 2 =	40
FAC species	40	x 3 =	120
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals	90	(A)	220 (B)
Prevalence Index = B/A =	2.4		

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 vines – 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.)

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

SOIL

Sampling Point: W-A18-201_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 4	10YR 5/4	100					Silt Loam	
4 - 14	10YR 5/4	95	7.5YR 5/8	5	C	M	Sandy Loam	
14 - 20	2.5Y 6/3	90	7.5YR 5/8	10	C	M	Sandy Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks:

No positive indication of hydric soils was observed.

Photo of Sample Plot
East

Photo of Sample Plot
West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Danville, Pittsylvania C... Sampling Date: 2018-July-16
Applicant/Owner: NextEra State: Virginia Sampling Point: W-F18-46_PFO-1
Investigator(s): Alexi Weber, SES Section, Township, Range:
Landform (hillslope, terrace, etc.): Foot slope Local relief (concave, convex, none): Concave Slope (%): 10 to 15
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.6371929 Long: -79.5294947 Datum: WGS84
Soil Map Unit Name: 23C 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 ____		
Hydric Soil Present?	Yes ✓ No ____		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ✓ No ____

Remarks:

Covertype is PFO. Area is wetland, all three wetland parameters are present.

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):	8	Wetland Hydrology Present? Yes ✓ No ____
Saturation Present? (includes capillary fringe)	Yes ✓ No ____	Depth (inches):	1	

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

Remarks:

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

Sampling Point: W-F18-46_PFO-1

Tree Stratum (Plot size: 20x10)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	60	Yes	FAC
2. *Liriodendron tulipifera*	20	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	80	= Total Cover	
50% of total cover: 40	20% of total cover:	16	
Sapling/Shrub Stratum (Plot size: 10x5)			
1. *Liriodendron tulipifera*	18	Yes	FACU
2. *Acer rubrum*	8	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	26	= Total Cover	
50% of total cover: 13	20% of total cover:	5.2	
Herb Stratum (Plot size: 5)			
1. *Smilax rotundifolia*	60	Yes	FAC
2. *Impatiens capensis*	20	No	FACW
3. *Lonicera japonica*	10	No	FACU
4. *Rosa multiflora*	10	No	FACU
5. *Microstegium vimineum*	5	No	FAC
6. *Vitis rotundifolia*	2	No	FAC
7.			
8.			
9.			
10.			
11.			
	107	= Total Cover	
50% of total cover: 53.5	20% of total cover:	21.4	
Woody Vine Stratum (Plot size: 10x20)			
1. *Smilax rotundifolia*	25	Yes	FAC
2.			
3.			
4.			
5.			
	25	= Total Cover	
50% of total cover: 12.5	20% of total cover:	5	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	4	(A)
Total Number of Dominant Species Across All Strata:	6	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	66.7	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	160	x 3 =	480
FACU species	58	x 4 =	232
UPL species	0	x 5 =	0
Column Totals	238	(A)	752 (B)

Prevalence Index = B/A = 3.2

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 vines – 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: W-F18-46_PFO-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	10YR 3/2	70	2.5YR 3/4	30	C	M/PL	Silt Loam	
6 - 18	10Y 5/1	93	10YR 3/6	5	C	M/PL	Loamy Sand	
6 - 18			5G 6/2	3	C	M		
-								
-								
-								
-								
-								
-								

[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: None
Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Danville, Pittsylvania C... Sampling Date: 2018-July-16
Applicant/Owner: NextEra State: Virginia Sampling Point: W-F18-46_UPL-1
Investigator(s): Alexi Weber, SES Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 10 to 15
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.6372238 Long: -79.5294559 Datum: WGS84
Soil Map Unit Name: 23C 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 ____		
Hydric Soil Present?	Yes ____ No ✓		
Wetland Hydrology Present?	Yes ____ No ✓	Is the Sampled Area within a Wetland?	Yes ____ No ✓

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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: W-F18-46_UPL-1

Tree Stratum (Plot size: 10x20)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	60	Yes	FAC
2. *Liriodendron tulipifera*	10	No	FACU
3.			
4.			
5.			
6.			
7.			
	70	= Total Cover	
50% of total cover: 35	20% of total cover:	14	

Sapling/Shrub Stratum (Plot size: 10x5)			
1.			
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. *Lonicera japonica*	30	Yes	FACU
2. *Quercus phellos*	8	No	FAC
3. *Smilax rotundifolia*	5	No	FAC
4. *Euonymus obovatus*	5	No	FAC
5. *Liquidambar styraciflua*	5	No	FAC
6. *Parthenocissus quinquefolia*	2	No	FACU
7.			
8.			
9.			
10.			
11.			
	55	= Total Cover	
50% of total cover: 27.5	20% of total cover:	11	

Woody Vine Stratum (Plot size: 10x20)			
1. *Smilax rotundifolia*	10	Yes	FAC
2.			
3.			
4.			
5.			
	10	= Total Cover	
50% of total cover: 5	20% of total cover:	2	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	66.7	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	93	x 3 =	279
FACU species	42	x 4 =	168
UPL species	0	x 5 =	0
Column Totals	135	(A)	447 (B)
Prevalence Index = B/A =	3.3		

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 vines – 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: W-F18-46_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 8	2.5Y 6/6	90	7.5YR 5/8	10	C	M	Silt Loam	
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: Roots/gravel
Depth (inches): 8

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot
South

Photo of Sample Plot
West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-July-16
Applicant/Owner: NextEra State: Sampling Point: W-F18-49_PFO-1
Investigator(s): Troy Savage, MS JB Section, Township, Range:
Landform (hillslope, terrace, etc.): Foot slope Local relief (concave, convex, none): Concave Slope (%): 2 to 5
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.6372518 Long: -79.5381902 Datum: WGS84
Soil Map Unit Name: 23D 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 ____		
Hydric Soil Present?	Yes ✓ No ____		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ✓ No ____

Remarks:

Covertype is PFO. Area is wetland, all three wetland parameters are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ✓ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____ No ✓	Depth (inches):		
Water Table Present?	Yes ✓ No ____	Depth (inches):	10	Wetland Hydrology Present? Yes ✓ No ____
Saturation Present? (includes capillary fringe)	Yes ✓ No ____	Depth (inches):	2	

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

Remarks:

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

Sampling Point: W-F18-49_PFO-1

Tree Stratum (Plot size: 10)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Carpinus caroliniana*	18	Yes	FAC
2. *Liquidambar styraciflua*	12	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	30	= Total Cover	
50% of total cover: 15	20% of total cover:	6	
Sapling/Shrub Stratum (Plot size: 10)			
1. *Liquidambar styraciflua*		Bad	FAC
2.	7		
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	7	= Total Cover	
50% of total cover: 3.5	20% of total cover:	1.4	
Herb Stratum (Plot size: 10)			
1. *Clethra alnifolia*	15	Yes	FAC
2. *Lycopus amplectens*	8	Yes	OBL
3. *Viburnum prunifolium*	5	No	FACU
4. *Persicaria virginiana*	5	No	FAC
5. *Microstegium vimineum*	5	No	FAC
6. *Rosa palustris*	4	No	OBL
7.			
8.			
9.			
10.			
11.			
	42	= Total Cover	
50% of total cover: 21	20% of total cover:	8.4	
Woody Vine Stratum (Plot size: 10)			
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:	4	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	12	x 1 =	12
FACW species	0	x 2 =	0
FAC species		x 3 =	
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals		(A)	(B)
Prevalence Index = B/A =			

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

__✓__ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Four Vegetation Strata:

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

Sapling/shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

Woody vines – 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: W-F18-49_PFO-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 4	2.5Y 4/2	100					Sandy Loam	
4 - 12	2.5Y 4/1	70	2.5Y 6/1	30	D	M/PL	Sand	
12 - 18	2.5Y 6/1	100					Sand	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-July-16
Applicant/Owner: NextEra State: Sampling Point: W-F18-49_UPL-1
Investigator(s): Troy Savage, MS JB Section, Township, Range:
Landform (hillslope, terrace, etc.): Flood Plain Local relief (concave, convex, none): Convex Slope (%): 2 to 5
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.6370944 Long: -79.5380064 Datum: WGS84
Soil Map Unit Name: 24D 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 ____		
Hydric Soil Present?	Yes ____ No ✓		
Wetland Hydrology Present?	Yes ____ No ✓	Is the Sampled Area within a Wetland?	Yes ____ No ✓

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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: W-F18-49_UPL-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fagus grandifolia*	30	Yes	FACU
2. *Carpinus caroliniana*	25	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	55	= Total Cover	
50% of total cover: 27.5	20% of total cover:	11	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Carpinus caroliniana*	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: 5)			
1. *Microstegium vimineum*	18	Yes	FAC
2. *Polystichum acrostichoides*	10	Yes	FACU
3. *Rubus pensilvanicus*	4	No	FAC
4. *Euonymus americanus*	3	No	FAC
5. *Lonicera japonica*	3	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	38	= Total Cover	
50% of total cover: 19	20% of total cover:	7.6	
Woody Vine Stratum (Plot size: 30)			
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:	3	(A)
Total Number of Dominant Species Across All Strata:	5	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	60	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	60	x 3 =	180
FACU species	43	x 4 =	172
UPL species	0	x 5 =	0
Column Totals	103	(A)	352 (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 vines – 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: W-F18-49_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 8	10YR 4/4	100					Sandy Loam	
8 - 16	10YR 4/6	100					Sandy Loam	
16 - 18	10YR 4/6	80	10YR 5/4	20	C		Sandy Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Westover, Pittsylvania... Sampling Date: 2018-July-17
Applicant/Owner: NextEra State: Virginia Sampling Point: W-F18-49_UPL-2
Investigator(s): Troy Savage, MS JB Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 2 to 5
Subregion (LRR or MLRA): Lat: 36.6376034 Long: -79.5375039 Datum: WGS84
Soil Map Unit Name: 23d 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 ____		
Hydric Soil Present?	Yes ____ No ✓		
Wetland Hydrology Present?	Yes ____ No ✓	Is the Sampled Area within a Wetland?	Yes ✓ No ____

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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:
No WT to 24 inches

Remarks:

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

Sampling Point: W-F18-49_UPL-2

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus americana*	35	Yes	FACU
2. *Carpinus caroliniana*	25	Yes	FAC
3. *Liquidambar styraciflua*	20	No	FAC
4. *Liriodendron tulipifera*	15	No	FACU
5. *Acer rubrum*	8	No	FAC
6.			
7.			
	103	= Total Cover	
50% of total cover: 51.5	20% of total cover:	20.6	

Sapling/Shrub Stratum (Plot size: 15)			
1. *Carpinus caroliniana*	20	Yes	FAC
2. *Quercus rubra*	15	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	35	= Total Cover	
50% of total cover: 17.5	20% of total cover:	7	

Herb Stratum (Plot size: 5)			
1. *Microstegium vimineum*	18	Yes	FAC
2. *Rosa multiflora*	10	Yes	FACU
3. *Smilax glauca*	5	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	33	= Total Cover	
50% of total cover: 16.5	20% of total cover:	6.6	

Woody Vine Stratum (Plot size: 30)			
1. *Campsis radicans*	10	Yes	FAC
2.			
3.			
4.			
5.			
	10	= Total Cover	
50% of total cover: 5	20% of total cover:	2	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	4	(A)
Total Number of Dominant Species Across All Strata:	7	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	57.1	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	101	x 3 =	303
FACU species	80	x 4 =	320
UPL species	0	x 5 =	0
Column Totals	181 (A)		623 (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 vines – 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: W-F18-49_UPL-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 8	10YR 4/4	100					Fine Sandy Loam	
8 - 18	10YR 4/4	90	10YR 5/4	10	D	M	Fine Sandy Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot
South

Photo of Sample Plot
West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Danville, Pittsylvania C... Sampling Date: 2018-July-27
Applicant/Owner: NextEra State: VA Sampling Point: W-E18-43_PEM-1
Investigator(s): Alexi Weber, JDF Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 1 to 10
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.632206 Long: -79.5430527 Datum: WGS84
Soil Map Unit Name: 23C, 23B 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 ____		
Hydric Soil Present?	Yes ✓ No ____		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ✓ No ____

Remarks:

Covertype is PEM. Area is wetland, all three wetland parameters are present.

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):	1
Water Table Present?	Yes ✓ No ____	Depth (inches):	0
Saturation Present? (includes capillary fringe)	Yes ✓ No ____	Depth (inches):	0

Wetland Hydrology Present? Yes ✓ No ____

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

Remarks:

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

Sampling Point: W-E18-43_PEM-1

Tree Stratum (Plot size: 20x10)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
50% of total cover: 0	20% of total cover: 0		
Sapling/Shrub Stratum (Plot size: 10x5)			
1.			
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. *Sagittaria latifolia*	50	Yes	OBL
2. *Solidago sp.*	40	Yes	NI
3. *Microstegium vimineum*	15	No	FAC
4. *Scirpus atrovirens*	2	No	OBL
5. *Dichanthelium clandestinum*	2	No	FAC
6. *Impatiens capensis*	2	No	FACW
7. *Leersia oryzoides*	2	No	OBL
8. *Carex tribuloides*	2	No	FACW
9. *Lonicera japonica*	2	No	FACU
10.			
11.			
	117	= Total Cover	
50% of total cover: 58.5	20% of total cover: 23.4		
Woody Vine Stratum (Plot size: 10x20)			
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:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	50	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	54	x 1 =	54
FACW species	4	x 2 =	8
FAC species	17	x 3 =	51
FACU species	2	x 4 =	8
UPL species	0	x 5 =	0
Column Totals	77	(A)	121 (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 vines – 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: W-E18-43_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	10YR 5/2	75	7.5YR 4/6	25	C	M/PL	Clay Loam	
6 - 8	10Y 5/1	80	7.5YR 4/6	20	C	M	Clay Loam	
8 - 18	5GY 5/1	80	7.5YR 4/6	20	C	M	Sandy Clay Loam	
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-June-28
Applicant/Owner: NextEra State: Sampling Point: W-E18-43_PFO-1
Investigator(s): Jenn Favela, TS Section, Township, Range:
Landform (hillslope, terrace, etc.): Intermittent Stream Local relief (concave, convex, none): Concave Slope (%): 1 to 3
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.6315806 Long: -79.5433665 Datum: WGS84
Soil Map Unit Name: 23C 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 ____		
Hydric Soil Present?	Yes ✓ No ____		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ✓ No ____

Remarks:

Covertype is PFO. Area is wetland, all three wetland parameters are present.

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):	2

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: W-E18-43_PFO-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	35	Yes	FAC
2. *Fraxinus pennsylvanica*	25	Yes	FACW
3. *Carpinus caroliniana*	15	Yes	FAC
4.			
5.			
6.			
7.			
	75	= Total Cover	
50% of total cover: 37.5	20% of total cover:	15	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Fraxinus pennsylvanica*	35	Yes	FACW
2. *Acer rubrum*	10	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	45	= Total Cover	
50% of total cover: 22.5	20% of total cover:	9	
Herb Stratum (Plot size: 5)			
1. *Microstegium vimineum*	15	Yes	FAC
2. *Fraxinus pennsylvanica*	10	Yes	FACW
3. *Smilax hispida*	10	Yes	FAC
4. *Vitis rotundifolia*	8	No	FAC
5. *Polystichum acrostichoides*	5	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	48	= Total Cover	
50% of total cover: 24	20% of total cover:	9.6	
Woody Vine Stratum (Plot size:)			
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:	8	(A)
Total Number of Dominant Species Across All Strata:	8	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	70	x 2 =	140
FAC species	93	x 3 =	279
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals	168 (A)		439 (B)
Prevalence Index = B/A =	2.6		

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 vines – 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: W-E18-43_PFO-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 2	2.5Y 2.5/1	100					Loam	
2 - 14	2.5Y 4/2	90	10YR 5/1	10	D	M	Sandy Loam	
14 - 18	2.5Y 5/1	100					Sand	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-June-28
Applicant/Owner: NextEra State: Sampling Point: W-E18-43_UPL-1
Investigator(s): Jenn Favela, Troy Savage, TS,SB,MS Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 2 to 5
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.6313425 Long: -79.5435959 Datum: WGS84
Soil Map Unit Name: NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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:
24 inch wt

Remarks:

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

Sampling Point: W-E18-43_UPL-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	65	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	65 = Total Cover		
50% of total cover: 32.5	20% of total cover: 13		
Sapling/Shrub Stratum (Plot size: 15)			
1. *Acer rubrum*	15	Yes	FAC
2.			
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: 5)			
1. *Microstegium vimineum*	35	Yes	FAC
2. *Parthenocissus quinquefolia*	25	Yes	FACU
3. *Agrostis hyemalis*	15	No	FAC
4. *Liquidambar styraciflua*	5	No	FAC
5. *Onoclea sensibilis*	3	No	FACW
6. *Toxicodendron radicans*	3	No	FAC
7. *Smilax hispida*	3	No	FAC
8.			
9.			
10.			
11.			
	89 = Total Cover		
50% of total cover: 44.5	20% of total cover: 17.8		
Woody Vine Stratum (Plot size: 30)			
1. *Toxicodendron radicans*	18	Yes	FAC
2.			
3.			
4.			
5.			
	18 = Total Cover		
50% of total cover: 9	20% of total cover: 3.6		

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	0	x 1 =	0
FACW species	3	x 2 =	6
FAC species	159	x 3 =	477
FACU species	25	x 4 =	100
UPL species	0	x 5 =	0
Column Totals	187	(A)	583 (B)
Prevalence Index = B/A =	3.1		

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 vines – 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: W-E18-43_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 1	10YR 3/3	100					Loam	
1 - 12	2.5Y 5/3	100					Sandy Loam	
12 - 18	2.5Y 6/3	95	2.5Y 4/4	5	C	M	Loamy Sand	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot
South

Photo of Sample Plot
West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Westover, Pittsylvania… Sampling Date: 2018-June-24
Applicant/Owner: NextEra State: Virginia Sampling Point: W-D18-32_PFO-1
Investigator(s): Jen Feese, B C, S B, J F, E N Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Convex Slope (%): 10 to 15
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.6263263 Long: -79.5487486 Datum: WGS84
Soil Map Unit Name: 23C 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 ____		
Hydric Soil Present?	Yes ✓ No ____		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ✓ No ____

Remarks:

Covertype is PFO. Area is wetland, all three wetland parameters are present.

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):	Wetland Hydrology Present? Yes ✓ No ____
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:

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

Sampling Point: W-D18-32_PFO-1

Tree Stratum (Plot size: 5' x 40')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	75	Yes	FAC
2. *Liquidambar styraciflua*	5	No	FAC
3.			
4.			
5.			
6.			
7.			
	80	= Total Cover	
50% of total cover: 40	20% of total cover:	16	

Sapling/Shrub Stratum (Plot size: 5' x 40')			
1. *Quercus phellos*	5	Yes	FAC
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: 5)			
1. *Quercus phellos*	10	Yes	FAC
2. *Smilax rotundifolia*	5	Yes	FAC
3. *Juncus coriaceus*	5	Yes	FACW
4. *Parthenocissus quinquefolia*	3	No	FACU
5. *Lonicera japonica*	3	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	26	= Total Cover	
50% of total cover: 13	20% of total cover:	5.2	

Woody Vine Stratum (Plot size: 5' x 40')			
1. *Smilax rotundifolia*	15	Yes	FAC
2.			
3.			
4.			
5.			
	15	= Total Cover	
50% of total cover: 7.5	20% of total cover:	3	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	6	(A)
Total Number of Dominant Species Across All Strata:	6	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	115	x 3 =	345
FACU species	6	x 4 =	24
UPL species	0	x 5 =	0
Column Totals	126 (A)		379 (B)
Prevalence Index = B/A =	3		

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 vines – 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: W-D18-32_PFO-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 1	10YR 5/2	100					Loam	
1 - 18	10YR 6/1	70	10Y 5/1	7	D	M		
1 - 18			10YR 4/6	15	C	M		
1 - 18			10YR 5/6	5	C	M		

[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: None
Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Westover, Pittsylvania… Sampling Date: 2018-June-24
Applicant/Owner: NextEra State: Virginia Sampling Point: W-D18-32_UPL-1
Investigator(s): Jen Feese, B C, S B, J F, E N Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Convex Slope (%): 10 to 15
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.6262625 Long: -79.5489529 Datum: WGS84
Soil Map Unit Name: 23C 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 ____		
Hydric Soil Present?	Yes ____ No ✓		
Wetland Hydrology Present?	Yes ____ No ✓	Is the Sampled Area within a Wetland?	Yes ____ No ✓

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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: W-D18-32_UPL-1

Tree Stratum (Plot size: 5' x 40')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	65	Yes	FAC
2. *Liquidambar styraciflua*	20	Yes	FAC
3. *Pinus taeda*	10	No	FAC
4.			
5.			
6.			
7.			
	95	= Total Cover	
50% of total cover: 47.5	20% of total cover:	19	
Sapling/Shrub Stratum (Plot size: 5' x 40')			
1. *Liquidambar styraciflua*	15	Yes	FAC
2. *Quercus phellos*	10	Yes	FAC
3. *Acer rubrum*	5	No	FAC
4. *Juniperus virginiana*	5	No	FACU
5. *Quercus marilandica*	5	No	UPL
6.			
7.			
8.			
9.			
	40	= Total Cover	
50% of total cover: 20	20% of total cover:	8	
Herb Stratum (Plot size: 5)			
1. *Quercus phellos*	5	Yes	FAC
2. *Juncus compressus*	5	Yes	FACW
3. *Smilax rotundifolia*	3	Yes	FAC
4. *Lonicera japonica*	3	Yes	FACU
5. *Toxicodendron radicans*	3	Yes	FAC
6. *Liquidambar styraciflua*	2	No	FAC
7.			
8.			
9.			
10.			
11.			
	21	= Total Cover	
50% of total cover: 10.5	20% of total cover:	4.2	
Woody Vine Stratum (Plot size: 5' x 40')			
1. *Smilax rotundifolia*	10	Yes	FAC
2.			
3.			
4.			
5.			
	10	= Total Cover	
50% of total cover: 5	20% of total cover:	2	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	9	(A)
Total Number of Dominant Species Across All Strata:	10	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	90	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	148	x 3 =	444
FACU species	8	x 4 =	32
UPL species	5	x 5 =	25
Column Totals	166	(A)	511 (B)

Prevalence Index = B/A = 3.1

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 vines – 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: W-D18-32_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 1	10YR 3/4	100					Loam	
1 - 2	2.5Y 6/2	100	2.5Y 6/2	0			Sandy Loam	
2 - 18	2.5Y 6/3	100					Sandy Loam	
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot
South

Photo of Sample Plot
West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-July-28
Applicant/Owner: NextEra State: Sampling Point: W-D18-42_PEM-1
Investigator(s): Beth Clements, JDF Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 1 to 3
Subregion (LRR or MLRA): Lat: 36.6172873 Long: -79.5597776 Datum: WGS84
Soil Map Unit Name: 5C3 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 ____		
Hydric Soil Present?	Yes ✓ No ____		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ✓ No ____

Remarks:

Covertype is PEM. Area is wetland, all three wetland parameters are present.

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):	Wetland Hydrology Present? Yes ✓ No ____
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:

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

Sampling Point: W-D18-42_PEM-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	5	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	5	= Total Cover	
50% of total cover: 2.5	20% of total cover:	1	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Rubus argutus*	10	Yes	FACU
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: 5)			
1. *Juncus effusus*	60	Yes	FACW
2. *Microstegium vimineum*	60	Yes	FAC
3. *Solidago gigantea*	20	No	FACW
4. *Eupatorium perfoliatum*	15	No	FACW
5. *Carex crinita*	15	No	OBL
6. *Carex lurida*	15	No	OBL
7. *Rubus argutus*	5	No	FACU
8. *Vernonia noveboracensis*	1	No	FACW
9.			
10.			
11.			
	191	= Total Cover	
50% of total cover: 95.5	20% of total cover:	38.2	
Woody Vine Stratum (Plot size: 30)			
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:	3	(A)
Total Number of Dominant Species Across All Strata:	4	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	75	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	30	x 1 =	30
FACW species	96	x 2 =	192
FAC species	65	x 3 =	195
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column Totals	206	(A)	477 (B)
Prevalence Index = B/A =	2.3		

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 vines – 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: W-D18-42_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 1	10YR 4/3	100					Loam	
1 - 9	2.5Y 5/2	70	7.5YR 4/6	30	C	M/PL	Clay Loam	
9 - 13	2.5Y 6/1	60	7.5YR 4/6	40	C	M/PL	Clay	
13 - 20	2.5Y 5/2	60	7.5YR 4/6	40	C	M/PL	Clay	
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-July-28
Applicant/Owner: NextEra State: Sampling Point: W-D18-42_UPL-1
Investigator(s): Beth Clements, JDF Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 1 to 3
Subregion (LRR or MLRA): Lat: 36.6174428 Long: -79.5599484 Datum: WGS84
Soil Map Unit Name: 5C3 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 ____		
Hydric Soil Present?	Yes ____ No ✓		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ____ No ✓

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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: W-D18-42_UPL-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	80	Yes	FAC
2. *Nyssa sylvatica*	20	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	100	= Total Cover	
50% of total cover: 50	20% of total cover:	20	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Liquidambar styraciflua*	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: 5)			
1. *Microstegium vimineum*	20	Yes	FAC
2. *Symphoricarpos orbiculatus*	10	Yes	FACU
3. *Smilax rotundifolia*	5	No	FAC
4. *Liriodendron tulipifera*	5	No	FACU
5. *Sanicula odorata*	2	No	FACU
6. *Toxicodendron radicans*	2	No	FAC
7. *Cinna arundinacea*	2	No	FACW
8. *Acer rubrum*	1	No	FAC
9.			
10.			
11.			
	47	= Total Cover	
50% of total cover: 23.5	20% of total cover:	9.4	
Woody Vine Stratum (Plot size: 30)			
1. *Smilax rotundifolia*	20	Yes	FAC
2. *Vitis labrusca*	5	Yes	FACU
3.			
4.			
5.			
	25	= Total Cover	
50% of total cover: 12.5	20% of total cover:	5	

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:	71.4	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	2	x 2 =	4
FAC species	158	x 3 =	474
FACU species	22	x 4 =	88
UPL species	0	x 5 =	0
Column Totals	182 (A)		566 (B)
Prevalence Index = B/A =	3.1		

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 vines – 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: W-D18-42_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 2	10YR 4/3	100					Loam	
2 - 12	10YR 5/4	80	7.5YR 4/6	20	C	M	Clay Loam	
12 - 18	10YR 5/4	83	7.5YR 4/6	15	C	M	Sandy Loam	
12 - 18			10YR 5/3	2	D	M		

[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: None

Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-Aug-06
Applicant/Owner: NextEra State: Sampling Point: W-F18-51_PEM-1
Investigator(s): Beth Clements, SES Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 2 to 5
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.6139083 Long: -79.5620011 Datum: WGS84
Soil Map Unit Name: 21D 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 ____		
Hydric Soil Present?	Yes _✓_ No ____		
Wetland Hydrology Present?	Yes _✓_ No ____	Is the Sampled Area within a Wetland?	Yes _✓_ No ____

Remarks:

Covertype is PEM. Area is wetland, all three wetland parameters are present.

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):	0	**Wetland Hydrology Present?** Yes _✓_ No ____
Saturation Present? (includes capillary fringe)	Yes _✓_ No ____	Depth (inches):	0	

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

Remarks:

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

Sampling Point: W-F18-51_PEM-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
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.			
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 canadensis*	50	Yes	OBL
2. *Arthraxon hispidus*	30	Yes	FAC
3. *Persicaria arifolia*	10	No	OBL
4. *Murdannia keisak*	5	No	OBL
5. *Microstegium vimineum*	5	No	FAC
6. *Vernonia noveboracensis*	5	No	FACW
7. *Symphyotrichum lanceolatum*	2	No	FACW
8. *Amphicarpaea bracteata*	1	No	FAC
9.			
10.			
11.			
	108	= Total Cover	
50% of total cover: 54	20% of total cover:	21.6	
Woody Vine Stratum (Plot size: 30)			
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:	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	65	x 1 =	65
FACW species	7	x 2 =	14
FAC species	36	x 3 =	108
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	108	(A)	187 (B)
Prevalence Index = B/A =	1.7		

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 vines – 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: W-F18-51_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 2	2.5Y 4/2	95	10YR 3/6	5	C	M/PL	Loam	
2 - 18	2.5Y 5/2	90	10YR 4/6	10	C	M/PL	Loam	
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-July-17
Applicant/Owner: NextEra State: Sampling Point: W-F18-51_PFO-1
Investigator(s): Alexi Weber, SES, JSF Section, Township, Range:
Landform (hillslope, terrace, etc.): Toe Local relief (concave, convex, none): Concave Slope (%): 10 to 15
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.6137533 Long: -79.5629199 Datum: WGS84
Soil Map Unit Name: Cecil Sandy loam NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Covertype is PFO. Area is wetland, all three wetland parameters are present.

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):	16	Wetland Hydrology Present? Yes ✓ No ____
Saturation Present? (includes capillary fringe)	Yes ✓ No ____	Depth (inches):	1	

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

Remarks:

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

Sampling Point: W-F18-51_PFO-1

Tree Stratum (Plot size: 10x20)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	40	Yes	FAC
2. *Carpinus caroliniana*	30	Yes	FAC
3. *Liquidambar styraciflua*	15	No	FAC
4. *Liriodendron tulipifera*	10	No	FACU
5.			
6.			
7.			
	95	= Total Cover	
50% of total cover: 47.5	20% of total cover:	19	
Sapling/Shrub Stratum (Plot size: 10x5)			
1. *Magnolia acuminata*	15	Yes	FACU
2.			
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: 5)			
1. *Microstegium vimineum*	50	Yes	FAC
2. *Arthraxon hispidus*	30	Yes	FAC
3. *Parathelypteris noveboracensis*	10	No	FAC
4. *Arisaema triphyllum*	5	No	FACW
5. *Smilax rotundifolia*	3	No	FAC
6. *Carex lurida*	2	No	OBL
7. *Dulichium arundinaceum*	1	No	OBL
8.			
9.			
10.			
11.			
	101	= Total Cover	
50% of total cover: 50.5	20% of total cover:	20.2	
Woody Vine Stratum (Plot size: 10x20)			
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	3	x 1 =	3
FACW species	5	x 2 =	10
FAC species	178	x 3 =	534
FACU species	25	x 4 =	100
UPL species	0	x 5 =	0
Column Totals	211 (A)		647 (B)
Prevalence Index = B/A =	3.1		

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 vines – 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: W-F18-51_PFO-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 5	10YR 2/2	97	10YR 3/3	3	C	PL	Loam	
5 - 7	10YR 4/1	96	10YR 3/4	4	C	PL	Silt Loam	
7 - 18	10YR 3/1	100					Silt Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot
South

Photo of Sample Plot
West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-July-17
Applicant/Owner: NextEra State: Sampling Point: W-F18-51_UPL-1
Investigator(s): Alexi Weber, SES, JSF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 10 to 15
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.6138086 Long: -79.5628612 Datum: WGS84
Soil Map Unit Name: Cecil Sandy Loam NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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: W-F18-51_UPL-1

Tree Stratum (Plot size: 10x20)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	25	Yes	FAC
2. *Magnolia acuminata*	20	Yes	FACU
3. *Liriodendron tulipifera*	20	Yes	FACU
4. *Liquidambar styraciflua*	10	No	FAC
5. *Quercus montana*	5	No	UPL
6.			
7.			
	80	= Total Cover	
50% of total cover: 40	20% of total cover:	16	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Nyssa sylvatica*	35	Yes	FAC
2. *Liquidambar styraciflua*	10	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	45	= Total Cover	
50% of total cover: 22.5	20% of total cover:	9	
Herb Stratum (Plot size: 5)			
1. *Quercus montana*	8	Yes	UPL
2. *Vitis labrusca*	5	Yes	FACU
3. *Vaccinium corymbosum*	3	No	FACW
4. *Smilax rotundifolia*	2	No	FAC
5. *Magnolia acuminata*	1	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	19	= Total Cover	
50% of total cover: 9.5	20% of total cover:	3.8	
Woody Vine Stratum (Plot size: 10x20)			
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:	3	(A)
Total Number of Dominant Species Across All Strata:	7	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	42.9	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	3	x 2 =	6
FAC species	82	x 3 =	246
FACU species	46	x 4 =	184
UPL species	13	x 5 =	65
Column Totals	144	(A)	501 (B)
Prevalence Index = B/A =	3.5		

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 vines – 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: W-F18-51_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 2	2.5Y 6/3	100					Loam	
2 - 18	2.5Y 7/4	100					Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Photo of Sample Plot
North

Photo of Sample Plot
East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Danville, Pittsylvania C... Sampling Date: 2018-July-18
Applicant/Owner: NextEra State: Virginia Sampling Point: W-E18-53_PEM-1
Investigator(s): Troy Savage, MS JB Section, Township, Range:
Landform (hillslope, terrace, etc.): Flood Plain Local relief (concave, convex, none): Concave Slope (%): 2 to 5
Subregion (LRR or MLRA): Lat: 36.605974 Long: -79.5680586 Datum: WGS84
Soil Map Unit Name: 5C3 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 ____		
Hydric Soil Present?	Yes ✓ No ____		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ✓ No ____

Remarks:

Covertype is PEM. Area is wetland, all three wetland parameters are present.

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):	18	Wetland Hydrology Present? Yes ✓ No ____
Saturation Present? (includes capillary fringe)	Yes ✓ No ____	Depth (inches):	12	

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

Remarks:

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

Sampling Point: W-E18-53_PEM-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
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.			
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. *Microstegium vimineum*	40	Yes	FAC
2. *Murdannia keisak*	30	Yes	OBL
3. *Boehmeria cylindrica*	25	No	FACW
4. *Eupatorium perfoliatum*	12	No	FACW
5. *Dulichium arundinaceum*	10	No	OBL
6. *Woodwardia virginica*	8	No	OBL
7. *Juncus effusus*	5	No	FACW
8. *Bidens aristosa*	4	No	FACW
9.			
10.			
11.			
	134	= Total Cover	
50% of total cover: 67	20% of total cover: 26.8		
Woody Vine Stratum (Plot size:)			
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:	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	48	x 1 =	48
FACW species	46	x 2 =	92
FAC species	40	x 3 =	120
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	134	(A)	260 (B)
Prevalence Index = B/A =	1.9		

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 vines – 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: W-E18-53_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 4	10YR 4/3	100					Sandy Clay	
4 - 10	10YR 4/2	80	10YR 5/4	20	C	PL	Loamy Sand	
10 - 18	10YR 4/1	90	10YR 4/4	10	C	PL	Sand	
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

Soils potentially disturbed from agricultural activities, but not considered to be a significant disturbance.

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-July-18
Applicant/Owner: NextEra State: Sampling Point: W-E18-53_UPL-1
Investigator(s): Troy Savage, MS JB Section, Township, Range:
Landform (hillslope, terrace, etc.): Foot slope Local relief (concave, convex, none): Convex Slope (%): 2 to 5
Subregion (LRR or MLRA): Lat: 36.6059772 Long: -79.5678573 Datum: WGS84
Soil Map Unit Name: 5c3 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 ✓		
Hydric Soil Present?	Yes ____ No ✓		
Wetland Hydrology Present?	Yes ____ No ✓	Is the Sampled Area within a Wetland?	Yes ____ No ✓

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present. Circumstances are not normal due to agricultural activities.

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):	Wetland Hydrology Present? Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:

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

Sampling Point: W-E18-53_UPL-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
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.			
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. *Sorghum bicolor*	40	Yes	UPL
2. *Microstegium vimineum*	20	Yes	FAC
3. *Phytolacca americana*	15	No	FACU
4. *Cenchrus americanus*	15	No	FACU
5. *Smilax glauca*	5	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	95 = Total Cover		
50% of total cover: 47.5	20% of total cover: 19		
Woody Vine Stratum (Plot size:)			
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:	2	(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	0	x 2 =	0
FAC species	20	x 3 =	60
FACU species	35	x 4 =	140
UPL species	40	x 5 =	200
Column Totals	95	(A)	400 (B)
Prevalence Index = B/A =	4.2		

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 vines – 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: W-E18-53_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 12	7.5YR 4/4	100					Sandy Clay Loam	
12 - 18	2.5Y 4/2	90	7.5YR 4/3	10	C	M	Sandy Clay Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Danville, Pittsylvania C... Sampling Date: 2018-July-18
Applicant/Owner: NextEra State: Virginia Sampling Point: W-F18-54_PEM-1
Investigator(s): Troy Savage, AW,SS,JF Section, Township, Range:
Landform (hillslope, terrace, etc.): Channel Local relief (concave, convex, none): Concave Slope (%): 1 to 10
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.6004183 Long: -79.5633118 Datum: WGS84
Soil Map Unit Name: 9B 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 ____		
Hydric Soil Present?	Yes ✓ No ____		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ✓ No ____

Remarks:

Covertype is PEM. Area is wetland, all three wetland parameters are present.

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):	6

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: W-F18-54_PEM-1

Tree Stratum (Plot size: 20x5)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		
Sapling/Shrub Stratum (Plot size: 10x5)			
1.			
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: 2x3)			
1. *Bidens aristosa*	70	Yes	FACW
2. *Leersia oryzoides*	30	Yes	OBL
3. *Solidago sp.*	8	No	NI
4. *Dichanthelium scoparium*	2	No	FACW
5. *Arthraxon hispidus*	2	No	FAC
6. *Juncus effusus*	2	No	FACW
7.			
8.			
9.			
10.			
11.			
	114 = Total Cover		
50% of total cover: 57	20% of total cover: 22.8		
Woody Vine Stratum (Plot size: 20x5)			
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:	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	30	x 1 =	30
FACW species	74	x 2 =	148
FAC species	2	x 3 =	6
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	106 (A)		184 (B)
Prevalence Index = B/A =	1.7		

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 vines – 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: W-F18-54_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	10YR 5/2	93	7.5YR 4/6	7	C	M	Silt Loam	
6 - 15	10YR 4/1	90	10YR 4/6	10	C	M/PL	Silty Clay Loam	
15 - 18	10YR 7/8	67	10YR 5/1	30	D	M	Silty Clay	
15 - 18	10YR 7/8	67	10YR 5/8	3	D	M		

[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: None
Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Danville, Pittsylvania C... Sampling Date: 2018-July-18
Applicant/Owner: NextEra State: Virginia Sampling Point: W-F18-54_UPL-1
Investigator(s): Alexi Weber, SES, JSF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1 to 10
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.6006044 Long: -79.563197 Datum: WGS84
Soil Map Unit Name: 9B 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 ____		
Hydric Soil Present?	Yes ____ No ✓		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ____ No ✓

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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: W-F18-54_UPL-1

Tree Stratum (Plot size: 20x10)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
50% of total cover: 0	20% of total cover:	0	

Sapling/Shrub Stratum (Plot size: 10x5)			
1.			
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: 3x2)			
1. *Bidens aristosa*	80	Yes	FACW
2. *Sorghum halepense*	3	No	FACU
3. *Arthraxon hispidus*	2	No	FAC
4. *Digitaria serotina*	2	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	87	= Total Cover	
50% of total cover: 43.5	20% of total cover:	17.4	

Woody Vine Stratum (Plot size: 20X10)			
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	0	x 1 =	0
FACW species	80	x 2 =	160
FAC species	4	x 3 =	12
FACU species	3	x 4 =	12
UPL species	0	x 5 =	0
Column Totals	87	(A)	184 (B)
Prevalence Index = B/A =	2.1		

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 vines – 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: W-F18-54_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	10YR 4/3	97	7.5YR 5/8	3	C	M	Loam	Compacted
6 - 12	10YR 5/3	97	10YR 5/8	3	C	M/PL	Loam	Compacted

[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: Compacted soil due to agricultural use of field

Depth (inches): 12

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Westover, Pittsylvania... Sampling Date: 2018-July-18
Applicant/Owner: NextEra State: Virginia Sampling Point: W-E18-55_PEM-1
Investigator(s): Troy Savage, MS JB Section, Township, Range:
Landform (hillslope, terrace, etc.): Flood Plain Local relief (concave, convex, none): Convex Slope (%): 2 to 5
Subregion (LRR or MLRA): Lat: 36.6032329 Long: -79.5702858 Datum: WGS84
Soil Map Unit Name: 5b3 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 ____		
Hydric Soil Present?	Yes ✓ No ____		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ✓ No ____

Remarks:

Covertype is PEM. Area is wetland, all three wetland parameters are present.

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):	12	Wetland Hydrology Present? Yes ✓ No ____
Saturation Present? (includes capillary fringe)	Yes ✓ No ____	Depth (inches):	10	

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

Remarks:

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

Sampling Point: W-E18-55_PEM-1

Tree Stratum (Plot size: 5x25)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Cicuta maculata*		No	OBL
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.			
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: 6x8)			
1. *Eragrostis elliottii*	20	Yes	FACW
2. *Microstegium vimineum*	15	Yes	FAC
3. *Juncus effusus*	10	No	FACW
4. *Rhexia lutea*	5	No	FACW
5. *Carex annectens*	5	No	FACW
6.			
7.			
8.			
9.			
10.			
11.			
	55	= Total Cover	
50% of total cover: 27.5	20% of total cover:	11	
Woody Vine Stratum (Plot size: 10)			
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:	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		x 1 =	
FACW species	40	x 2 =	80
FAC species	15	x 3 =	45
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals		(A)	(B)
Prevalence Index = B/A =			

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

__✓__ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Four Vegetation Strata:

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

Sapling/shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

Woody vines – 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.)

All tree species present within the vicinity of the wetland boundary were rooted in upland areas experiencing different soil and/or hydrologic conditions.

SOIL

Sampling Point: W-E18-55_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 3	7.5YR 4/4	100					Sand	
3 - 10	10YR 5/1	80	10YR 4/2	20	D	M/PL	Sand	
10 - 18	5G 3/1	85	7.5YR 4/6	15	C	PL	Sandy Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Soils potentially disturbed from agricultural activities, but not considered to be a significant disturbance.

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Westover, Pittsylvania… Sampling Date: 2018-July-18
Applicant/Owner: NextEra State: Virginia Sampling Point: W-E18-55_UPL-1
Investigator(s): Troy Savage, MS JB Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Undulating Slope (%): 2 to 5
Subregion (LRR or MLRA): Lat: 36.6032649 Long: -79.5702719 Datum: WGS84
Soil Map Unit Name: 5C3 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 ✓		
Hydric Soil Present?	Yes ____ No ✓		
Wetland Hydrology Present?	Yes ____ No ✓	Is the Sampled Area within a Wetland?	Yes ____ No ✓

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present. Circumstances are not normal due to agricultural activities. The unmanaged condition of vegetation could not be determined, therefore, per Chapter 5 procedures, presence/absence of indicators of hydric soils and wetland hydrology provided the basis for the wetland determination at this sample point.

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: W-E18-55_UPL-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Liriodendron tulipifera*	15	Yes	FACU
2. *Acer rubrum*	8	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	23	= Total Cover	
50% of total cover: 11.5	20% of total cover:	4.6000000000000005	

Sapling/Shrub Stratum (Plot size: 15)			
1.			
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: 5x5)			
1. *Microstegium vimineum*	25	Yes	FAC
2. *Dactylis glomerata*	15	Yes	FACU
3. *Hieracium greenii*	8	No	FACU
4. *Phytolacca americana*	7	No	FACU
5. *Bidens aristosa*	3	No	FACW
6. *Lonicera japonica*	3	No	FACU
7.			
8.			
9.			
10.			
11.			
	61	= Total Cover	
50% of total cover: 30.5	20% of total cover:	12.2	

Woody Vine Stratum (Plot size: 10)			
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:	4	(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	3	x 2 =	6
FAC species	33	x 3 =	99
FACU species	48	x 4 =	192
UPL species	0	x 5 =	0
Column Totals	84	(A)	297 (B)
Prevalence Index = B/A =	3.5		

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 vines – 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.)

Recent logging activity. No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC− or drier).

SOIL

Sampling Point: W-E18-55_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 10	7.5YR 4/4	100					Sandy Clay	
10 - 18	2.5Y 4/3	100					Sandy Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Danville, Pittsylvania C… Sampling Date: 2018-June-27
Applicant/Owner: NextEra State: Virginia Sampling Point: W-D18-35_PFO-1
Investigator(s): Jacob Fleckenstein, Eileen Nakahata, Beth Clements Section, Township, Range:
Landform (hillslope, terrace, etc.): Flood Plain Local relief (concave, convex, none): Concave Slope (%): 10 to 15
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5984652 Long: -79.5742533 Datum: WGS84
Soil Map Unit Name: 5C3:Cecil Sandy Loam NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Covertype is PFO. Area is wetland, all three wetland parameters are present.

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):	Wetland Hydrology Present? Yes ✓ No ____
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:

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

Sampling Point: W-D18-35_PFO-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Carpinus caroliniana*	50	Yes	FAC
2. *Acer rubrum*	25	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	75	= Total Cover	
50% of total cover: 37.5	20% of total cover:	15	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Lindera benzoin*	30	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	30	= Total Cover	
50% of total cover: 15	20% of total cover:	6	
Herb Stratum (Plot size: 5)			
1. *Onoclea sensibilis*	2	No	FACW
2. *Persicaria virginiana*	1	No	FAC
3. *Poaceae*	1	No	NI
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	4	= Total Cover	
50% of total cover: 2	20% of total cover:	0.8	
Woody Vine Stratum (Plot size: 30)			
1. *UNKNOWN*	1	No	NI
2.			
3.			
4.			
5.			
	1	= Total Cover	
50% of total cover: 0.5	20% of total cover:	0.2	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	3	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	2	x 2 =	4
FAC species	106	x 3 =	318
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	108 (A)		322 (B)

Prevalence Index = B/A = 3

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 vines – 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: W-D18-35_PFO-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 18	2.5Y 5/2	70	2.5Y 5/3	23	C	M	Clay Loam	
0 - 18			7.5YR 5/6	7	C	M/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)
__ 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: None
Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

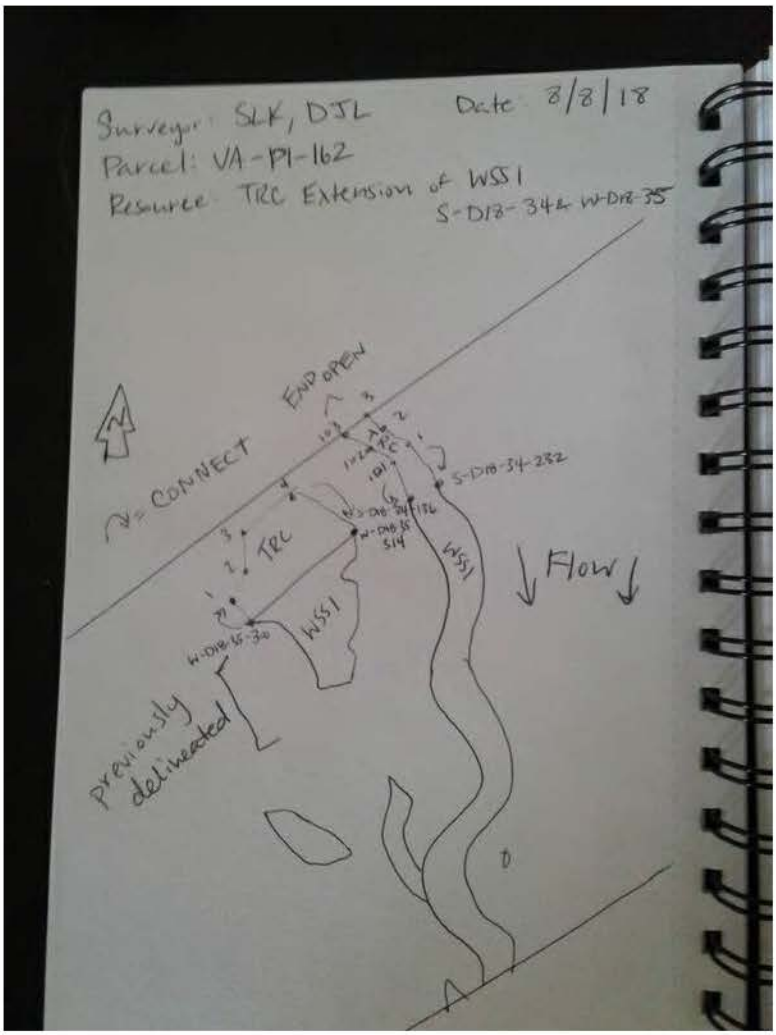
Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

Photo of Sample Plot Sketch



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-June-27
Applicant/Owner: NextEra State: Sampling Point: W-D18-35_UPL-1
Investigator(s): Jacob Fleckenstein, Eileen Nakahata, Beth Clements Section, Township, Range:
Landform (hillslope, terrace, etc.): Flood Plain Local relief (concave, convex, none): Concave Slope (%): 10 to 15
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5987201 Long: -79.574246 Datum: WGS84
Soil Map Unit Name: 5C3: Cecil Sandy loam NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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: W-D18-35_UPL-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	60	Yes	FAC
2. *Carpinus caroliniana*	10	No	FAC
3. *Liriodendron tulipifera*	5	No	FACU
4. *Ailanthus altissima*	5	No	FACU
5.			
6.			
7.			
	80	= Total Cover	
50% of total cover: 40	20% of total cover:		16

Sapling/Shrub Stratum (Plot size: 15)			
1. *Lindera benzoin*	50	Yes	FAC
2. *Fraxinus pennsylvanica*	1	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	51	= Total Cover	
50% of total cover: 25.5	20% of total cover:		10.200000000000003

Herb Stratum (Plot size: 5)			
1. *Microstegium vimineum*	25	Yes	FAC
2. *UNKNOWN*	1	Yes	NI
3. *Circaea canadensis*	15	Percent cover cannot be greater than a previous species	FACU
4. *Arisaema triphyllum*	10	No	FACW
5. *Fraxinus pennsylvanica*	5	No	FACW
6. *Polygonatum biflorum*	5	No	FACU
7. *Persicaria virginiana*	2	No	FAC
8.			
9.			
10.			
11.			
	63	= Total Cover	
50% of total cover: 31.5	20% of total cover:		12.600000000000001

Woody Vine Stratum (Plot size:)			
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:	3	(A)
Total Number of Dominant Species Across All Strata:	4	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	75	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	16	x 2 =	32
FAC species	147	x 3 =	441
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column Totals	193	(A)	593 (B)
Prevalence Index = B/A =	3.1		

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 vines – 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: W-D18-35_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 3	10YR 3/4	100					Loam	
3 - 11	10YR 4/4						Loam	
11 - 18	10YR 4/6	99	10YR 5/6	1			Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot
South

Photo of Sample Plot
West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Danville, Pittsylvania C… Sampling Date: 2018-June-27
Applicant/Owner: NextEra State: Virginia Sampling Point: W-D18-35_PFO-1
Investigator(s): Jacob Fleckenstein, Eileen Nakahata, Beth Clements Section, Township, Range:
Landform (hillslope, terrace, etc.): Flood Plain Local relief (concave, convex, none): Concave Slope (%): 10 to 15
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5984652 Long: -79.5742533 Datum: WGS84
Soil Map Unit Name: 5C3:Cecil Sandy Loam NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Covertype is PFO. Area is wetland, all three wetland parameters are present.

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):	Wetland Hydrology Present? Yes ✓ No ____
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:

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

Sampling Point: W-D18-35_PFO-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Carpinus caroliniana*	50	Yes	FAC
2. *Acer rubrum*	25	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	75	= Total Cover	
50% of total cover: 37.5	20% of total cover:	15	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Lindera benzoin*	30	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	30	= Total Cover	
50% of total cover: 15	20% of total cover:	6	
Herb Stratum (Plot size: 5)			
1. *Onoclea sensibilis*	2	No	FACW
2. *Persicaria virginiana*	1	No	FAC
3. *Poaceae*	1	No	NI
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	4	= Total Cover	
50% of total cover: 2	20% of total cover:	0.8	
Woody Vine Stratum (Plot size: 30)			
1. *UNKNOWN*	1	No	NI
2.			
3.			
4.			
5.			
	1	= Total Cover	
50% of total cover: 0.5	20% of total cover:	0.2	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	3	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	2	x 2 =	4
FAC species	106	x 3 =	318
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	108 (A)		322 (B)

Prevalence Index = B/A = 3

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 vines – 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: W-D18-35_PFO-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 18	2.5Y 5/2	70	2.5Y 5/3	23	C	M	Clay Loam	
0 - 18			7.5YR 5/6	7	C	M/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)
__ 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: None
Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

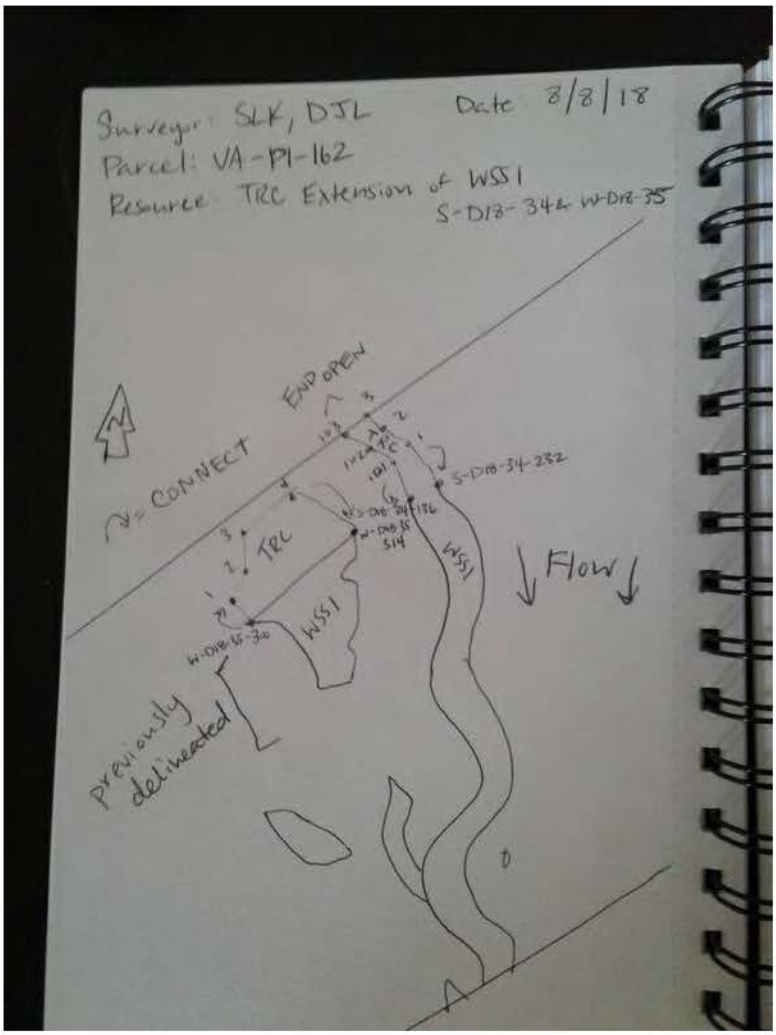
Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

Photo of Sample Plot Sketch



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-June-27
Applicant/Owner: NextEra State: Sampling Point: W-D18-35_UPL-1
Investigator(s): Jacob Fleckenstein, Eileen Nakahata, Beth Clements Section, Township, Range:
Landform (hillslope, terrace, etc.): Flood Plain Local relief (concave, convex, none): Concave Slope (%): 10 to 15
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5987201 Long: -79.574246 Datum: WGS84
Soil Map Unit Name: 5C3: Cecil Sandy loam NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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: W-D18-35_UPL-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	60	Yes	FAC
2. *Carpinus caroliniana*	10	No	FAC
3. *Liriodendron tulipifera*	5	No	FACU
4. *Ailanthus altissima*	5	No	FACU
5.			
6.			
7.			
	80	= Total Cover	
50% of total cover: 40	20% of total cover:		16

Sapling/Shrub Stratum (Plot size: 15)			
1. *Lindera benzoin*	50	Yes	FAC
2. *Fraxinus pennsylvanica*	1	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	51	= Total Cover	
50% of total cover: 25.5	20% of total cover:		10.200000000000003

Herb Stratum (Plot size: 5)			
1. *Microstegium vimineum*	25	Yes	FAC
2. *UNKNOWN*	1	Yes	NI
3. *Circaea canadensis*	15	Percent cover cannot be greater than a previous species	FACU
4. *Arisaema triphyllum*	10	No	FACW
5. *Fraxinus pennsylvanica*	5	No	FACW
6. *Polygonatum biflorum*	5	No	FACU
7. *Persicaria virginiana*	2	No	FAC
8.			
9.			
10.			
11.			
	63	= Total Cover	
50% of total cover: 31.5	20% of total cover:		12.600000000000001

Woody Vine Stratum (Plot size:)			
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:	3	(A)
Total Number of Dominant Species Across All Strata:	4	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	75	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	16	x 2 =	32
FAC species	147	x 3 =	441
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column Totals	193	(A)	593 (B)
Prevalence Index = B/A =	3.1		

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 vines – 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: W-D18-35_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 3	10YR 3/4	100					Loam	
3 - 11	10YR 4/4						Loam	
11 - 18	10YR 4/6	99	10YR 5/6	1			Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot
South

Photo of Sample Plot
West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Westover, Pittsylvania... Sampling Date: 2018-July-19
Applicant/Owner: NextEra State: Virginia Sampling Point: W-D18-41_PFO-1
Investigator(s): Alexi Weber, SES, JSF, JDF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 1 to 3
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.59533 Long: -79.5762491 Datum: WGS84
Soil Map Unit Name: 23C 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 ____		
Hydric Soil Present?	Yes ✓ No ____		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ✓ No ____

Remarks:

Covertype is PFO. Area is wetland, all three wetland parameters are present.

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):	Wetland Hydrology Present? Yes ✓ No ____
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:

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

Sampling Point: W-D18-41_PFO-1

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	60	Yes	FAC
2. *Liquidambar styraciflua*	40	Yes	FAC
3. *Fraxinus pennsylvanica*	10	No	FACW
4. *Prunus serotina*	1	No	FACU
5.			
6.			
7.			
	111	= Total Cover	
50% of total cover: 55.5	20% of total cover:	22.200000000000003	

Sapling/Shrub Stratum (Plot size: 15')			
1. *Lindera benzoin*	25	Yes	FAC
2. *Liquidambar styraciflua*	5	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	30	= Total Cover	
50% of total cover: 15	20% of total cover:	6	

Herb Stratum (Plot size: 5)			
1. *Microstegium vimineum*	90	Yes	FAC
2. *Impatiens capensis*	15	No	FACW
3. *Cinna arundinacea*	10	No	FACW
4. *Carpinus caroliniana*	1	No	FAC
5. *Lonicera japonica*	1	No	FACU
6. *Persicaria longiseta*	1	No	FAC
7. *Boehmeria cylindrica*	1	No	FACW
8.			
9.			
10.			
11.			
	119	= Total Cover	
50% of total cover: 59.5	20% of total cover:	23.8	

Woody Vine Stratum (Plot size: 30')			
1. *Smilax rotundifolia*	30	Yes	FAC
2. *Vitis labrusca*	5	No	FACU
3. *Parthenocissus quinquefolia*	1	No	FACU
4.			
5.			
	36	= Total Cover	
50% of total cover: 18	20% of total cover:	7.2	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	5	(A)
Total Number of Dominant Species Across All Strata:	5	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	36	x 2 =	72
FAC species	252	x 3 =	756
FACU species	8	x 4 =	32
UPL species	0	x 5 =	0
Column Totals	296 (A)		860 (B)
Prevalence Index = B/A =	2.9		

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 vines – 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: W-D18-41_PFO-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	2.5Y 4/2	90	7.5YR 3/4	7	C	M/PL	Clay Loam	
0 - 6	2.5Y 4/2	90	7.5YR 5/6	3	C	M		
6 - 18	2.5Y 5/2	93	10YR 5/8	7	C	M	Loam	
6 - 18								

[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: None
Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot
South

Photo of Sample Plot
West

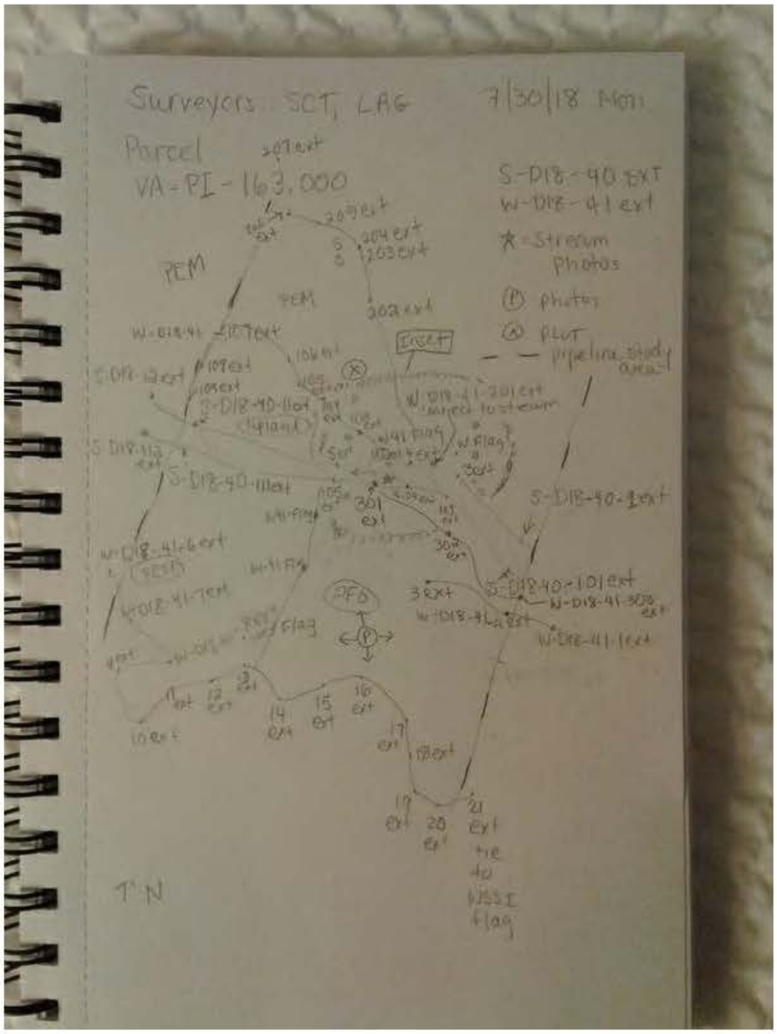
Photo of Sample Plot
Sketch

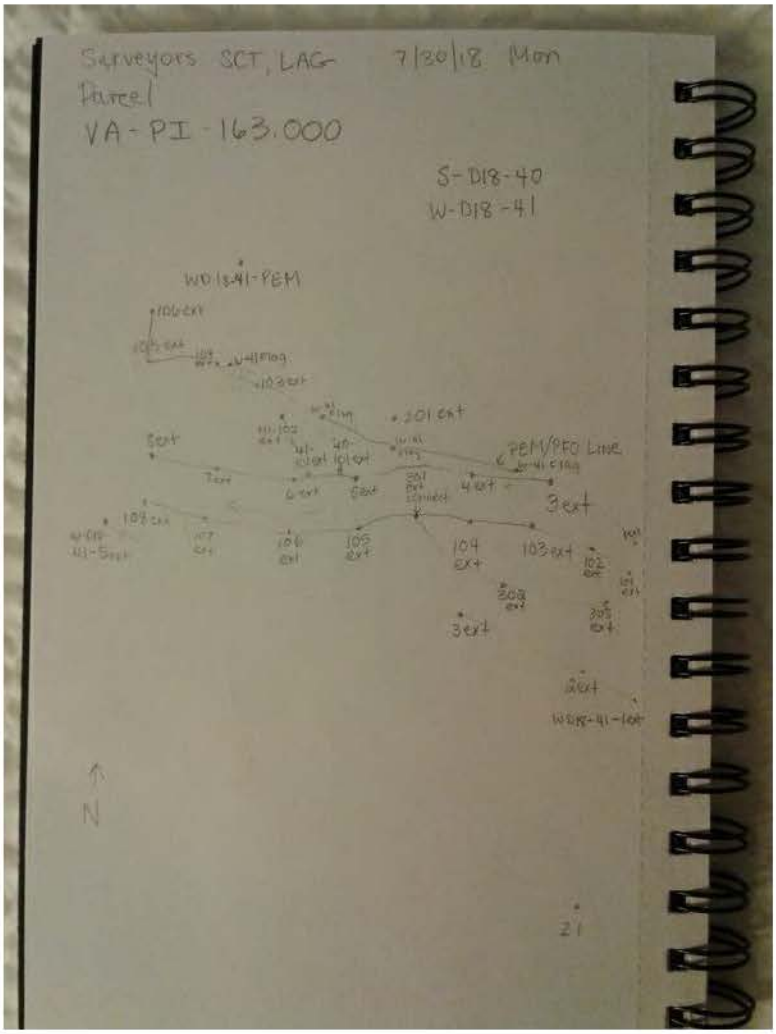
41-ext West

41-ext North

41-ext East

41-ext South


Surveyors SCT, LAG
7/30/18 Mon
Parcel
VA-PI-163.000
S-D18-40 EXT
W-D18-41 ext
★ = Stream Photos
Ⓟ photos
ⓧ PLOT
pipeline study area
PEM
PEM
Inset
S-D18-40-101 ext
W-D18-41-1 ext
tie to WSSI flag
T N


Surveyors SCT, LAG 7/30/18 Mon
Parcel
VA-PI-163.000
S-D18-40
W-D18-41
WD18-41-PEM
PEM/PFO Line
3ext
N
21

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-July-19
Applicant/Owner: NextEra State: Sampling Point: W-D18-41_UPL-1
Investigator(s): Alexi Weber, SES, JSF, JDF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flood Plain Local relief (concave, convex, none): None Slope (%): 0 to 1
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5958064 Long: -79.5767207 Datum: WGS84
Soil Map Unit Name: 23C 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 ____		
Hydric Soil Present?	Yes ____ No ✓		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ____ No ✓

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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: W-D18-41_UPL-1

Tree Stratum (Plot size: 15')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Liquidambar styraciflua*	30	Yes	FAC
2. *Carya glabra*	15	Yes	FACU
3. *Quercus rubra*	15	Yes	FACU
4.			
5.			
6.			
7.			
	60	= Total Cover	
50% of total cover: 30	20% of total cover:	12	

Sapling/Shrub Stratum (Plot size: 15')			
1. *Lindera benzoin*	30	Yes	FAC
2. *Nyssa sylvatica*	10	Yes	FAC
3. *Liquidambar styraciflua*	5	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
	45	= Total Cover	
50% of total cover: 22.5	20% of total cover:	9	

Herb Stratum (Plot size: 5)			
1. *Microstegium vimineum*	80	Yes	FAC
2. *Boehmeria cylindrica*	5	No	FACW
3. *Sanicula odorata*	1	No	FACU
4. *Lonicera japonica*	1	No	FACU
5. *Parthenocissus quinquefolia*	1	No	FACU
6. *Carpinus caroliniana*	1	No	FAC
7. *Oxalis stricta*	1	No	FACU
8. *Fagus grandifolia*	1	No	FACU
9. *Toxicodendron radicans*	1	No	FAC
10.			
11.			
	92	= Total Cover	
50% of total cover: 46	20% of total cover:	18.4	

Woody Vine Stratum (Plot size: 15)			
1. *Smilax rotundifolia*	15	Yes	FAC
2. *Toxicodendron radicans*	10	Yes	FAC
3. *Vitis labrusca*	10	Yes	FACU
4.			
5.			
	35	= Total Cover	
50% of total cover: 17.5	20% of total cover:	7	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	6	(A)
Total Number of Dominant Species Across All Strata:	9	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	66.7	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	182	x 3 =	546
FACU species	45	x 4 =	180
UPL species	0	x 5 =	0
Column Totals	232	(A)	736 (B)
Prevalence Index = B/A =	3.2		

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 vines – 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: W-D18-41_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 12	7.5YR 3/4	100					Loam	
12 - 18	7.5YR 3/4	95	7.5YR 4/6	5	C	M	Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot
South

Photo of Sample Plot
West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Westover, Pittsylvania... Sampling Date: 2018-July-19
Applicant/Owner: NextEra State: Virginia Sampling Point: W-D18-41_PFO-1
Investigator(s): Alexi Weber, SES, JSF, JDF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 1 to 3
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.59533 Long: -79.5762491 Datum: WGS84
Soil Map Unit Name: 23C 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 ____		
Hydric Soil Present?	Yes ✓ No ____		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ✓ No ____

Remarks:

Covertype is PFO. Area is wetland, all three wetland parameters are present.

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):	Wetland Hydrology Present? Yes ✓ No ____
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:

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

Sampling Point: W-D18-41_PFO-1

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	60	Yes	FAC
2. *Liquidambar styraciflua*	40	Yes	FAC
3. *Fraxinus pennsylvanica*	10	No	FACW
4. *Prunus serotina*	1	No	FACU
5.			
6.			
7.			
	111	= Total Cover	
50% of total cover: 55.5	20% of total cover:	22.200000000000003	

Sapling/Shrub Stratum (Plot size: 15')			
1. *Lindera benzoin*	25	Yes	FAC
2. *Liquidambar styraciflua*	5	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	30	= Total Cover	
50% of total cover: 15	20% of total cover:	6	

Herb Stratum (Plot size: 5)			
1. *Microstegium vimineum*	90	Yes	FAC
2. *Impatiens capensis*	15	No	FACW
3. *Cinna arundinacea*	10	No	FACW
4. *Carpinus caroliniana*	1	No	FAC
5. *Lonicera japonica*	1	No	FACU
6. *Persicaria longiseta*	1	No	FAC
7. *Boehmeria cylindrica*	1	No	FACW
8.			
9.			
10.			
11.			
	119	= Total Cover	
50% of total cover: 59.5	20% of total cover:	23.8	

Woody Vine Stratum (Plot size: 30')			
1. *Smilax rotundifolia*	30	Yes	FAC
2. *Vitis labrusca*	5	No	FACU
3. *Parthenocissus quinquefolia*	1	No	FACU
4.			
5.			
	36	= Total Cover	
50% of total cover: 18	20% of total cover:	7.2	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	5	(A)
Total Number of Dominant Species Across All Strata:	5	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	36	x 2 =	72
FAC species	252	x 3 =	756
FACU species	8	x 4 =	32
UPL species	0	x 5 =	0
Column Totals	296 (A)		860 (B)
Prevalence Index = B/A =	2.9		

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 vines – 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: W-D18-41_PFO-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	2.5Y 4/2	90	7.5YR 3/4	7	C	M/PL	Clay Loam	
0 - 6	2.5Y 4/2	90	7.5YR 5/6	3	C	M		
6 - 18	2.5Y 5/2	93	10YR 5/8	7	C	M	Loam	
6 - 18								

[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: None
Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot
South

Photo of Sample Plot
West

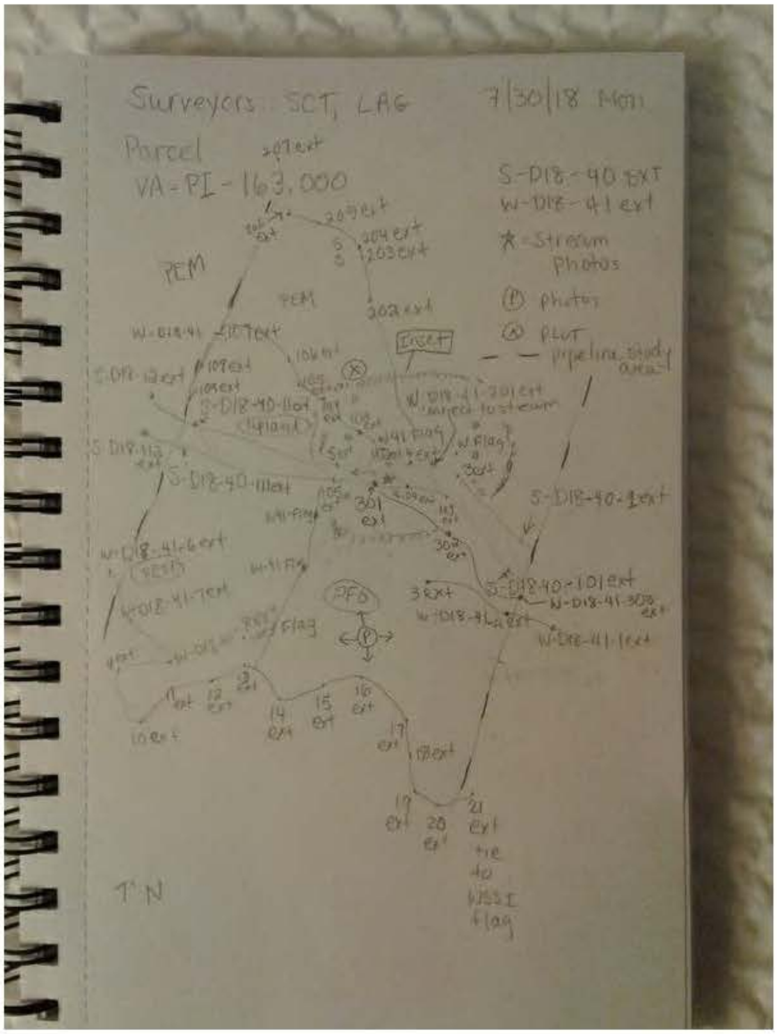
Photo of Sample Plot
Sketch

41-ext West

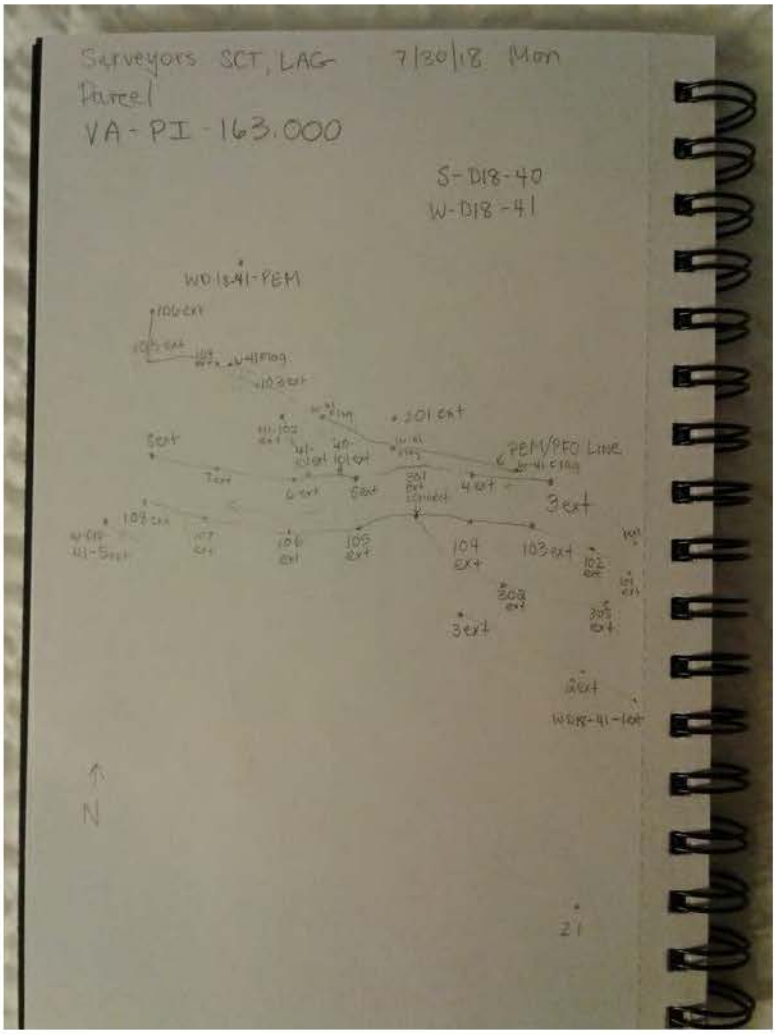
41-ext North

41-ext East

41-ext South



Surveyors SCT, LAG
7/30/18 Mon
Parcel
VA-PI-163,000
S-D18-40 EXT
W-D18-41 ext
= Stream Photos
photos
PLOT
pipeline study area
PEM
PEM
204 ext
203 ext
202 ext
Inset
S-D18-40-110ext
(upland)
S-D18-40-111ext
W-D18-41-201ext
W-D18-41-6ext
W-D18-41-7ext
S-D18-40-1ext
S-D18-40-101ext
W-D18-41-1ext
3 ext
PFO
10 ext
14 ext
15 ext
16 ext
17 ext
18 ext
19 ext
20 ext
21 ext
tie to WSSI flag
T N


Surveyors SCT, LAG 7/30/18 Mon
Parcel
VA-PI-163.000
S-D18-40
W-D18-41
WD18-41-PEM
PEM/PFO Line
3ext
N
21

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-July-19
Applicant/Owner: NextEra State: Sampling Point: W-D18-41_UPL-1
Investigator(s): Alexi Weber, SES, JSF, JDF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flood Plain Local relief (concave, convex, none): None Slope (%): 0 to 1
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5958064 Long: -79.5767207 Datum: WGS84
Soil Map Unit Name: 23C 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 ____		
Hydric Soil Present?	Yes ____ No ✓		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ____ No ✓

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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: W-D18-41_UPL-1

Tree Stratum (Plot size: 15')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Liquidambar styraciflua*	30	Yes	FAC
2. *Carya glabra*	15	Yes	FACU
3. *Quercus rubra*	15	Yes	FACU
4.			
5.			
6.			
7.			
	60	= Total Cover	
50% of total cover: 30	20% of total cover:	12	

Sapling/Shrub Stratum (Plot size: 15')			
1. *Lindera benzoin*	30	Yes	FAC
2. *Nyssa sylvatica*	10	Yes	FAC
3. *Liquidambar styraciflua*	5	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
	45	= Total Cover	
50% of total cover: 22.5	20% of total cover:	9	

Herb Stratum (Plot size: 5)			
1. *Microstegium vimineum*	80	Yes	FAC
2. *Boehmeria cylindrica*	5	No	FACW
3. *Sanicula odorata*	1	No	FACU
4. *Lonicera japonica*	1	No	FACU
5. *Parthenocissus quinquefolia*	1	No	FACU
6. *Carpinus caroliniana*	1	No	FAC
7. *Oxalis stricta*	1	No	FACU
8. *Fagus grandifolia*	1	No	FACU
9. *Toxicodendron radicans*	1	No	FAC
10.			
11.			
	92	= Total Cover	
50% of total cover: 46	20% of total cover:	18.4	

Woody Vine Stratum (Plot size: 15)			
1. *Smilax rotundifolia*	15	Yes	FAC
2. *Toxicodendron radicans*	10	Yes	FAC
3. *Vitis labrusca*	10	Yes	FACU
4.			
5.			
	35	= Total Cover	
50% of total cover: 17.5	20% of total cover:	7	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	6	(A)
Total Number of Dominant Species Across All Strata:	9	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	66.7	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	182	x 3 =	546
FACU species	45	x 4 =	180
UPL species	0	x 5 =	0
Column Totals	232	(A)	736 (B)
Prevalence Index = B/A =	3.2		

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 vines – 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: W-D18-41_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 12	7.5YR 3/4	100					Loam	
12 - 18	7.5YR 3/4	95	7.5YR 4/6	5	C	M	Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot
South

Photo of Sample Plot
West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Westover, Pittsylvania... Sampling Date: 2018-Aug-08
Applicant/Owner: NextEra State: Virginia Sampling Point: W-C18-95_PEM-2
Investigator(s): Don Lockwood, Simon King, Don Lockwood Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 10 to 15
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5903708 Long: -79.58333 Datum: WGS84
Soil Map Unit Name: Pinkston-Mayodan complex NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes _✓_ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Covertype is PEM. Area is wetland, all three wetland parameters are present.

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):	1
Water Table Present?	Yes _✓_ No ____	Depth (inches):	0
Saturation Present? (includes capillary fringe)	Yes _✓_ No ____	Depth (inches):	0

Wetland Hydrology Present? Yes _✓_ No ____

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

Remarks:

A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

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

Sampling Point: W-C18-95_PEM-2

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
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.			
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. *Bidens frondosa*	20	Yes	FACW
2. *Carex stricta*	20	Yes	OBL
3. *Persicaria sagittata*	20	Yes	OBL
4. *Juncus effusus*	20	Yes	FACW
5. *Carex lurida*	20	Yes	OBL
6. *Dichanthelium clandestinum*	10	No	FAC
7. *Poa palustris*	10	No	FACW
8. *Microstegium vimineum*	10	No	FAC
9.			
10.			
11.			
	130 = Total Cover		
50% of total cover: 65	20% of total cover: 26		
Woody Vine Stratum (Plot size: 30)			
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:	5	(A)
Total Number of Dominant Species Across All Strata:	5	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	60	x 1 =	60
FACW species	50	x 2 =	100
FAC species	20	x 3 =	60
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	130 (A)		220 (B)
Prevalence Index = B/A =	1.7		

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 vines – 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: W-C18-95_PEM-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
-								

[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: None
Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Hydrology Photos

Vegetation Photos

Soil Photos

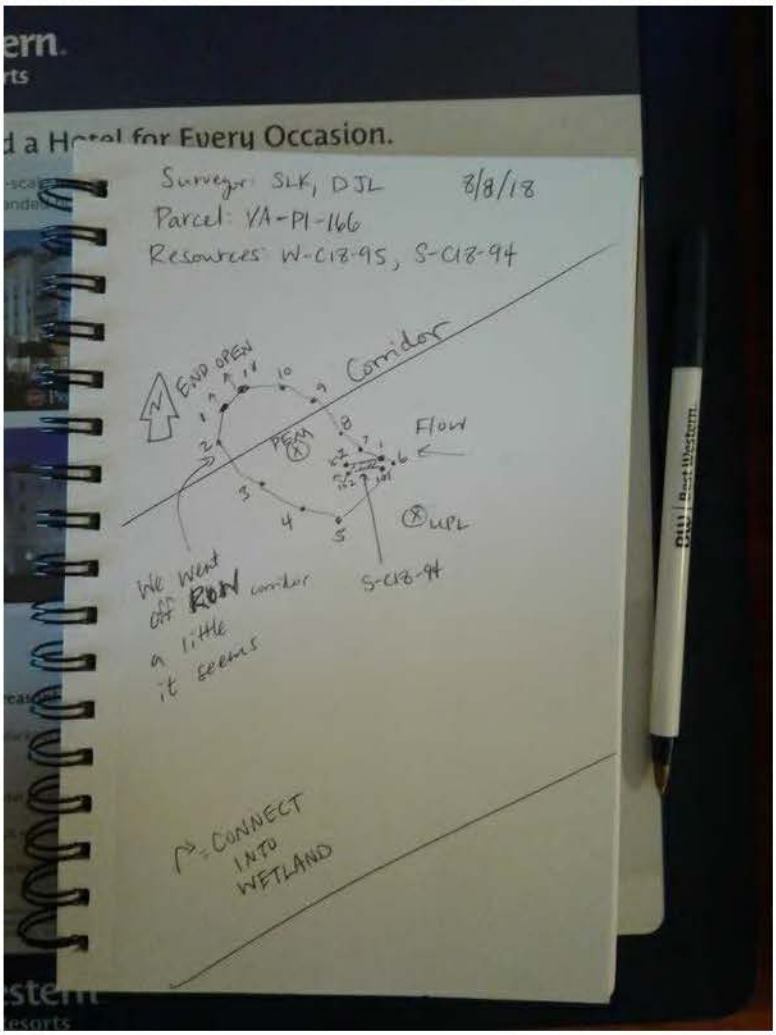
Photo of Sample Plot North

Photo of Sample Plot
East

Photo of Sample Plot
South

Photo of Sample Plot
West

Photo of Sample Plot
Sketch



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Westover, Pittsylvania... Sampling Date: 2018-Aug-08
Applicant/Owner: NextEra State: Virginia Sampling Point: W-C18-95_UPL-1
Investigator(s): Don Lockwood, Simon King, Don Lockwood Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 15 to 20
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5902922 Long: -79.5830078 Datum: WGS84
Soil Map Unit Name: Pinkston-Mayodan complex very stony NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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:

No positive indication of wetland hydrology was observed.

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

Sampling Point: W-C18-95_UPL-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Carya cordiformis*	40	Yes	FACU
2. *Acer rubrum*	30	Yes	FAC
3. *Quercus rubra*	20	Yes	FACU
4.			
5.			
6.			
7.			
	90	= Total Cover	

50% of total cover: 45 20% of total cover: 18

Sapling/Shrub Stratum (Plot size: 15)			
1. *Carya cordiformis*	5	Yes	FACU
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: 5)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	0	= Total Cover	

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

Woody Vine Stratum (Plot size: 30)			
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:	4	(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	30	x 3 =	90
FACU species	65	x 4 =	260
UPL species	0	x 5 =	0
Column Totals	95	(A)	350 (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 vines – 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: W-C18-95_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
-								

[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: None
Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks:

No positive indication of hydric soils was observed.

Hydrology Photos

Vegetation Photos

Soil Photos

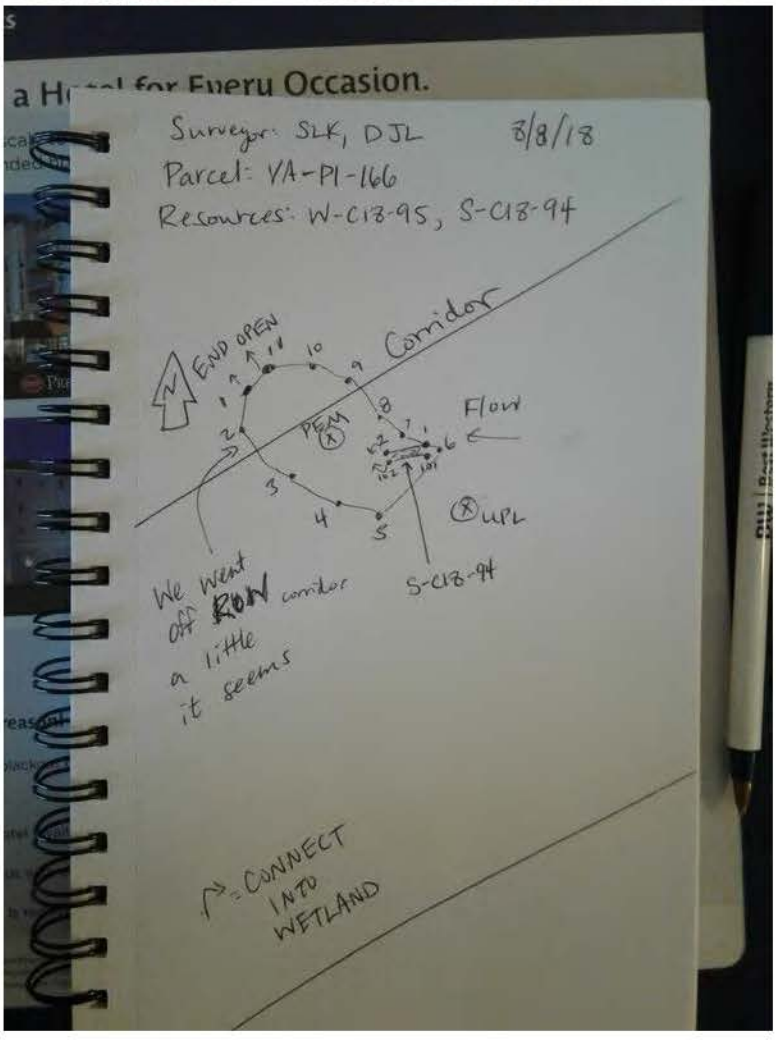
Photo of Sample Plot North

Photo of Sample Plot
East

Photo of Sample Plot
South

Photo of Sample Plot
West

Photo of Sample Plot
Sketch



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-July-18
Applicant/Owner: NextEra State: Sampling Point: W-D18-39_PFO-1
Investigator(s): Jen Feese, ESN, SWB Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 10 to 15
Subregion (LRR or MLRA): Lat: 36.5883175 Long: -79.5845287 Datum: WGS84
Soil Map Unit Name: 23C 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 ____		
Hydric Soil Present?	Yes ✓ No ____		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ✓ No ____

Remarks:

Covertype is PFO. Area is wetland, all three wetland parameters are present.

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):	1
Water Table Present?	Yes ✓ No ____	Depth (inches):	0
Saturation Present? (includes capillary fringe)	Yes ✓ No ____	Depth (inches):	0

Wetland Hydrology Present? Yes ✓ No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Surface water in approx 25% of plot

Remarks:

The criterion for wetland hydrology is met.

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

Sampling Point: W-D18-39_PFO-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Liquidambar styraciflua*	20	Yes	FAC
2. *Acer rubrum*		No	FAC
3. *Liriodendron tulipifera*			
4.			
5.			
6.			
7.			
	20	= Total Cover	
50% of total cover: 10	20% of total cover:	4	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Liquidambar styraciflua*	15	Yes	FAC
2. *Acer rubrum*	15	Yes	FAC
3. *Liriodendron tulipifera*	5	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
	35	= Total Cover	
50% of total cover: 17.5	20% of total cover:	7	
Herb Stratum (Plot size: 5)			
1. *Microstegium vimineum*	30	Yes	FAC
2. *Leersia oryzoides*	10	No	OBL
3. *Dichanthelium clandestinum*	5	No	FAC
4. *Carex lurida*	5	No	OBL
5. *Pteridium aquilinum*	4	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	54	= Total Cover	
50% of total cover: 27	20% of total cover:	10.8	
Woody Vine Stratum (Plot size: 30)			
1. *Smilax rotundifolia*	15	Yes	FAC
2.			
3.			
4.			
5.			
	15	= Total Cover	
50% of total cover: 7.5	20% of total cover:	3	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	5	(A)
Total Number of Dominant Species Across All Strata:	5	(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		x 3 =	
FACU species	9	x 4 =	36
UPL species	0	x 5 =	0
Column Totals		(A)	(B)
Prevalence Index = B/A =			

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

__✓__ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Four Vegetation Strata:

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

Sapling/shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

Woody vines – 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: W-D18-39_PFO-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 1	10YR 3/2	100					Loam	many fine roots
1 - 2	10YR 3/2	100					Sandy Loam	
2 - 4	10YR 4/2	100					Sandy Loam	
4 - 6	10YR 5/1	100					Sandy Clay Loam	
6 - 18	10YR 5/1	100					Loamy Sand	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? **Yes ☑ No ☐**

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot
South

Photo of Sample Plot
West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-July-18
Applicant/Owner: NextEra State: Sampling Point: W-D18-39_UPL-1
Investigator(s): Jen Feese, ESN, SWB Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 5 to 10
Subregion (LRR or MLRA): Lat: 36.5883863 Long: -79.5844384 Datum: WGS84
Soil Map Unit Name: 23C 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 ____	
Hydric Soil Present?	Yes ____ No ✓	
Wetland Hydrology Present?	Yes ____ No ✓	Is the Sampled Area within a Wetland? Yes ____ No ✓

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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):	Wetland Hydrology Present? Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:

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

Sampling Point: W-D18-39_UPL-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Liriodendron tulipifera*	30	Yes	FACU
2. *Liquidambar styraciflua*	20	Yes	FAC
3. *Quercus palustris*	10	No	FACW
4. *Carpinus caroliniana*	10	No	FAC
5. *Acer rubrum*	10	No	FAC
6. *Ulmus americana*	10	No	FACW
7.			
	90	= Total Cover	
50% of total cover: 45	20% of total cover:	18	

Sapling/Shrub Stratum (Plot size: 15)			
1. *Liriodendron tulipifera*	50	Yes	FACU
2. *Liquidambar styraciflua*	20	Yes	FAC
3. *Prunus serotina*	10	No	FACU
4. *Carya tomentosa*	10	No	UPL
5. *Not Listed Plant*	10	No	UPL
6. *Carpinus caroliniana*	5	No	FAC
7. *Quercus montana*	5	No	UPL
8. *Nyssa sylvatica*	5	No	FAC
9. *Quercus alba*	5	No	FACU
	120	= Total Cover	
50% of total cover: 60	20% of total cover:	24	

Herb Stratum (Plot size: 5)			
1. *Euonymus americanus*	1	No	FAC
2. *Poaceae*	1	No	NI
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	2	= Total Cover	
50% of total cover: 1	20% of total cover:	0.4	

Woody Vine Stratum (Plot size: 30)			
1. *Smilax rotundifolia*	35	Yes	FAC
2.			
3.			
4.			
5.			
	35	= Total Cover	
50% of total cover: 17.5	20% of total cover:	7	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	3	(A)
Total Number of Dominant Species Across All Strata:	5	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	60	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	106	x 3 =	318
FACU species	95	x 4 =	380
UPL species	25	x 5 =	125
Column Totals	246	(A)	863 (B)
Prevalence Index = B/A =	3.5		

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 vines – 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: W-D18-39_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 2	7.5YR 2.5/2	100					Loam	
2 - 6	7.5YR 4/4	100					Loam	
6 - 18	10YR 4/4	95	2.5YR 4/6	5	C	M	Loamy Sand	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Danville, Pittsylvania C... Sampling Date: 2018-July-31
Applicant/Owner: NextEra State: Virginia Sampling Point: W-A18-204_PEM-1
Investigator(s): Laura Giese, Susan Thebert, Don Lockwood Section, Township, Range:
Landform (hillslope, terrace, etc.): Toe Local relief (concave, convex, none): Concave Slope (%): 0 to 1
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5870384 Long: -79.5871179 Datum: WGS84
Soil Map Unit Name: Mayodan fine sandy loam NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Covertype is PEM. Area is wetland, all three wetland parameters are present. Previously disturbed for utility ROW.

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:

The criterion for wetland hydrology is met.

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

Sampling Point: W-A18-204_PEM-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
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.			
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. *Dichanthelium clandestinum*	30	Yes	FAC
2. *Bidens frondosa*	30	Yes	FACW
3. *Amphicarpaea bracteata*	25	Yes	FAC
4. *Juncus effusus*	10	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	95	= Total Cover	
50% of total cover: 47.5	20% of total cover:	19	
Woody Vine Stratum (Plot size: 30)			
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:	3	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	40	x 2 =	80
FAC species	55	x 3 =	165
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	95	(A)	245 (B)

Prevalence Index = B/A = 2.6

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 vines – 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.)

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

SOIL

Sampling Point: W-A18-204_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 4	10YR 5/4	95	10YR 5/8	5	C	M	Sandy Loam	
4 - 11	2.5Y 5/2	90	7.5YR 4/6	10	C	M/PL	Sandy Loam	
11 - 17	2.5Y 6/4	80	7.5YR 4/6	20	C	M/PL	Silty Clay	
17 - 20	2.5Y 5/2	90	10YR 5/8	5	C	M	Sandy Loam	
17 - 20			2.5Y 5/1	5	D	M		

[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: None
Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

A positive indication of hydric soil was observed.

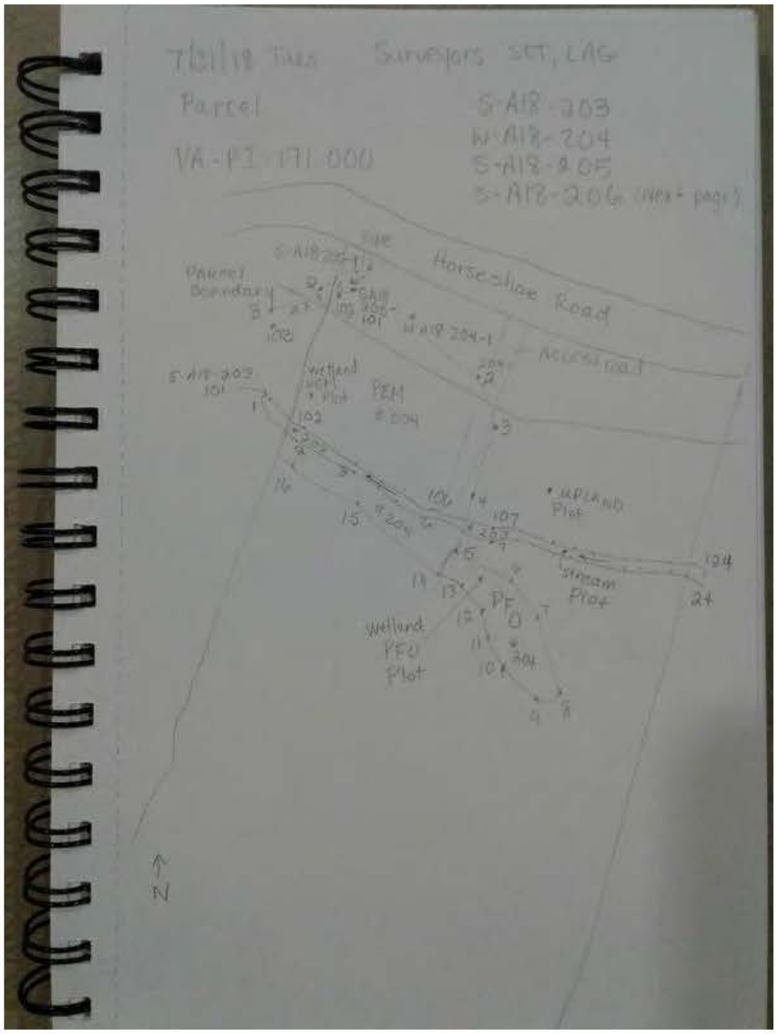
Photo of Sample Plot North

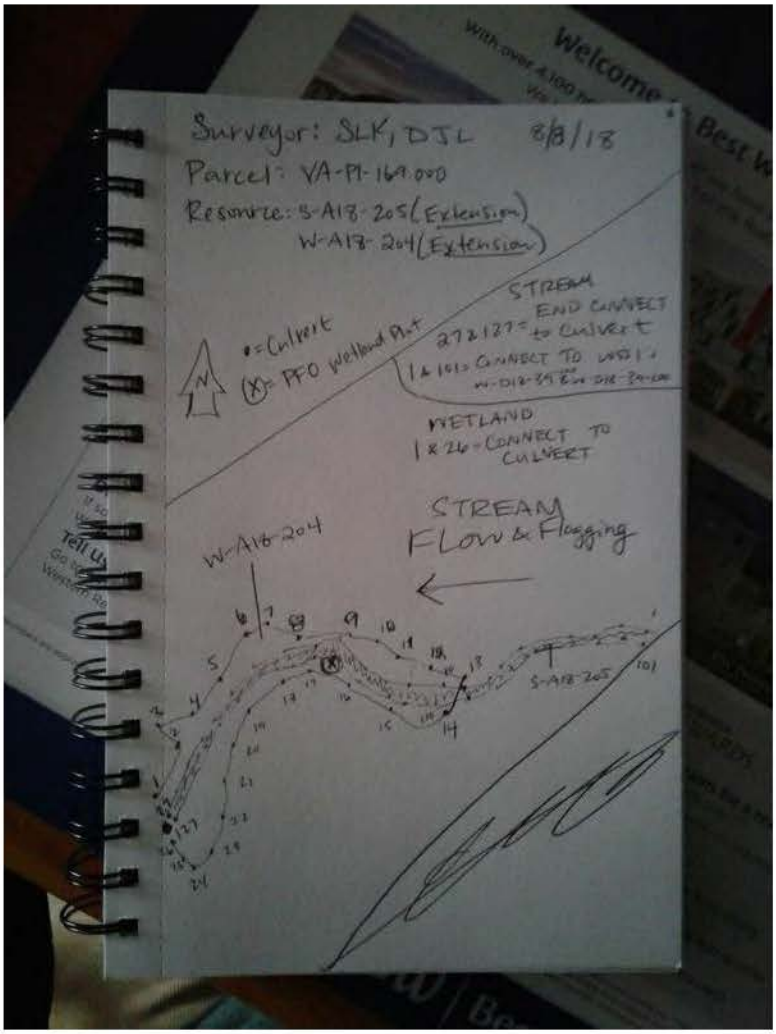
Photo of Sample Plot East

Photo of Sample Plot
South

Photo of Sample Plot
West

Photo of Sample Plot
Sketch


Surveyors SCT, LAG
Parcel
S-A18-203
W-A18-204
S-A18-205
S-A18-206 (next page)
Horseshoe Road
Parcel Boundary
Access road
Wetland PEM Plot
PEM
Upland Plot
Stream Plot
Wetland PFO Plot
PFO
N


Surveyor: SLK, DJL 8/8/18
Parcel: VA-PI-169.000
Resource: S-A18-205 (Extension)
W-A18-204 (Extension)
•=Culvert
(X)= PFO Wetland Pt.
STREAM
END CONNECT to Culvert
WETLAND
1 & 26 - CONNECT TO CULVERT
STREAM
Flow & Flagging
W-A18-204
S-A18-205

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Danville, Pittsylvania C... Sampling Date: 2018-July-31
Applicant/Owner: NextEra State: Virginia Sampling Point: W-A18-204_PFO-1
Investigator(s): Laura Giese, Susan Thebert, Don Lockwood Section, Township, Range:
Landform (hillslope, terrace, etc.): Foot slope Local relief (concave, convex, none): Concave Slope (%): 1 to 3
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.586792 Long: -79.5869368 Datum: WGS84
Soil Map Unit Name: NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Covertype is PFO. Area is wetland, all three wetland parameters are present.

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):	7	Wetland Hydrology Present? Yes ✓ No ____
Saturation Present? (includes capillary fringe)	Yes ✓ No ____	Depth (inches):	0	

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

Remarks:

The criterion for wetland hydrology is met.

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

Sampling Point: W-A18-204_PFO-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	10	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	10	= Total Cover	
50% of total cover: 5	20% of total cover:	2	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Carpinus caroliniana*	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: 5)			
1. *Woodwardia areolata*	25	Yes	FACW
2. *Glyceria striata*	20	Yes	OBL
3. *Leersia oryzoides*	10	No	OBL
4. *Smilax rotundifolia*	5	No	FAC
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)			
1. *Smilax rotundifolia*	5	Yes	FAC
2.			
3.			
4.			
5.			
	5	= Total Cover	
50% of total cover: 2.5	20% of total cover:	1	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	5	(A)
Total Number of Dominant Species Across All Strata:	5	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	30	x 1 =	30
FACW species	25	x 2 =	50
FAC species	30	x 3 =	90
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	85	(A)	170 (B)

Prevalence Index = B/A = 2

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 vines – 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.)

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

SOIL

Sampling Point: W-A18-204_PFO-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 2	10YR 3/2	100					Silt Loam	
2 - 13	10YR 4/2	98	10YR 5/8	2	C	M	Sandy Loam	
13 - 17	2.5Y 5/1	98	10YR 5/8	2	C	M	Loamy Sand	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: Rock
Depth (inches): 17

Hydric Soil Present? **Yes** ☑ **No** ☐

Remarks:

A positive indication of hydric soil was observed.

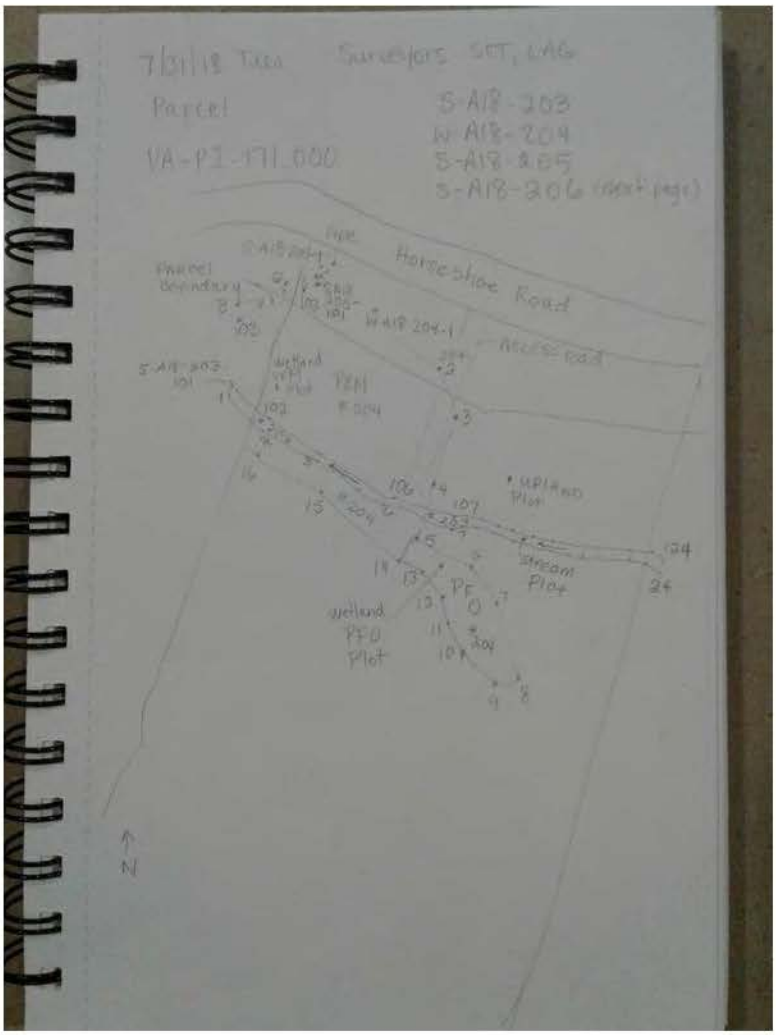
Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

Photo of Sample Plot Sketch



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Danville, Pittsylvania C... Sampling Date: 2018-Aug-08
Applicant/Owner: NextEra State: Virginia Sampling Point: W-A18-204_PFO-2
Investigator(s): Don Lockwood, Simon King, Don Lockwood Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 10 to 15
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5875158 Long: -79.586036 Datum: WGS84
Soil Map Unit Name: Mayodan fine sandy loam NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes _✓_ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Covertype is PFO. Area is wetland, all three wetland parameters are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- _✓_ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- _✓_ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____ No _✓_	Depth (inches):		
Water Table Present?	Yes _✓_ No ____	Depth (inches):	10	**Wetland Hydrology Present?** Yes _✓_ No ____
Saturation Present? (includes capillary fringe)	Yes _✓_ No ____	Depth (inches):	0	

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

Remarks:

A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

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

Sampling Point: W-A18-204_PFO-2

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus alba*	30	Yes	FACU
2. *Liquidambar styraciflua*	15	Yes	FAC
3. *Fraxinus pennsylvanica*	15	Yes	FACW
4. *Carpinus caroliniana*	10	No	FAC
5.			
6.			
7.			
	70	= Total Cover	
50% of total cover: 35	20% of total cover:	14	

Sapling/Shrub Stratum (Plot size: 15)			
1.			
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. *Microstegium vimineum*	70	Yes	FAC
2. *Dichanthelium clandestinum*	10	No	FAC
3. *Liquidambar styraciflua*	10	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	90	= Total Cover	
50% of total cover: 45	20% of total cover:	18	

Woody Vine Stratum (Plot size: 30)			
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:	3	(A)
Total Number of Dominant Species Across All Strata:	4	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	75	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	15	x 2 =	30
FAC species	115	x 3 =	345
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column Totals	160	(A)	495 (B)
Prevalence Index = B/A =	3.1		

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 vines – 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: W-A18-204_PFO-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 12	10YR 4/2	80	10YR 4/6	20	C	M	Silt Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Hydrology Photos

Vegetation Photos

Soil Photos

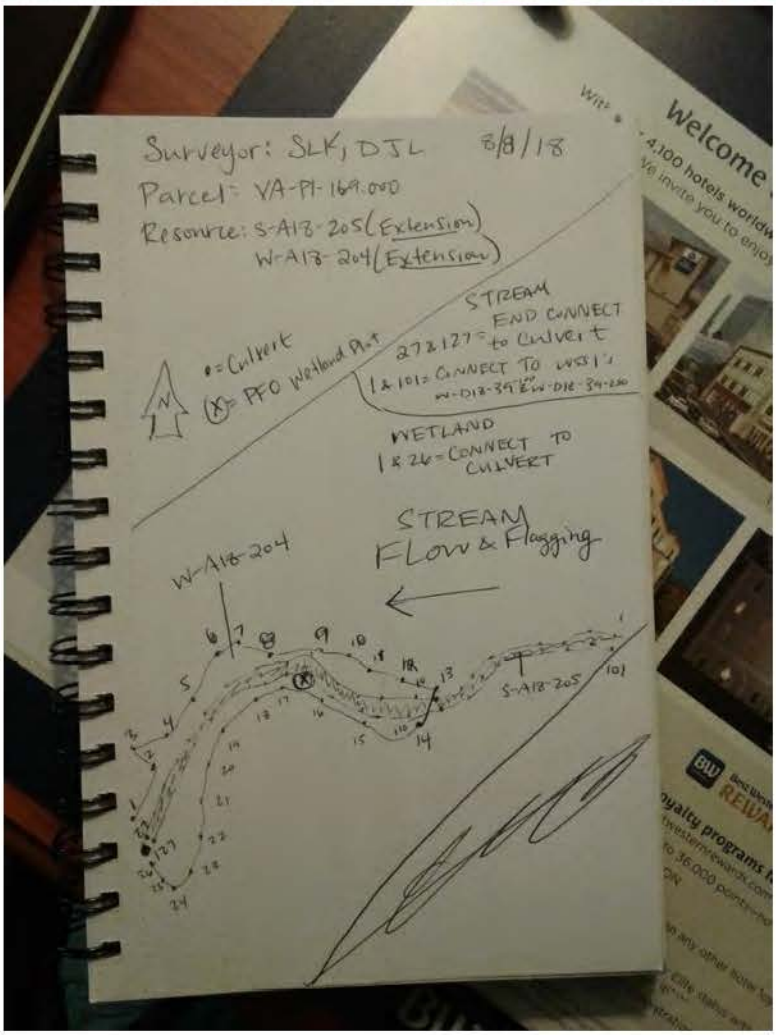
Photo of Sample Plot North

Photo of Sample Plot
East

Photo of Sample Plot
South

Photo of Sample Plot
West

Photo of Sample Plot
Sketch



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Danville, Pittsylvania C... Sampling Date: 2018-July-31
Applicant/Owner: NextEra State: Virginia Sampling Point: W-A18-204_UPL-1
Investigator(s): Laura Giese, Susan Thebert, Don Lockwood Section, Township, Range:
Landform (hillslope, terrace, etc.): Foot slope Local relief (concave, convex, none): Convex Slope (%): 2 to 5
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5868679 Long: -79.5868363 Datum: WGS84
Soil Map Unit Name: NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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:

The criterion for wetland hydrology is not met.

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

Sampling Point: W-A18-204_UPL-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Liriodendron tulipifera*	30	Yes	FACU
2. *Quercus rubra*	10	No	FACU
3. *Pinus virginiana*	10	No	UPL
4. *Oxydendrum arboreum*	5	No	UPL
5.			
6.			
7.			
	55	= Total Cover	
50% of total cover: 27.5	20% of total cover:	11	

Sapling/Shrub Stratum (Plot size: 15)			
1. *Cornus florida*	10	Yes	FACU
2. *Carya glabra*	5	Yes	FACU
3. *Juniperus virginiana*	5	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
	20	= Total Cover	
50% of total cover: 10	20% of total cover:	4	

Herb Stratum (Plot size: 5)			
1. *Vitis aestivalis*	5	Yes	FACU
2. *Tipularia discolor*	5	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	10	= Total Cover	
50% of total cover: 5	20% of total cover:	2	

Woody Vine Stratum (Plot size: 30)			
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:	0	(A)
Total Number of Dominant Species Across All Strata:	6	(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	70	x 4 =	280
UPL species	15	x 5 =	75
Column Totals	85	(A)	355 (B)
Prevalence Index = B/A =	4.2		

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 vines – 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.)

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

SOIL

Sampling Point: W-A18-204_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 1	10YR 3/2	100					Loam	
1 - 18	10YR 4/3	100					Loam	
18 - 22	10YR 5/2	95	7.5YR 5/6	5	C	M	Sandy Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks:

No positive indication of hydric soils was observed.

Photo of Sample Plot North

Photo of Sample Plot South

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-June-27
Applicant/Owner: NextEra State: Sampling Point: W-E18-37_PFO-1
Investigator(s): Jenn Favela, TS,SB Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 15 to 20
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5850841 Long: -79.5986639 Datum: WGS84
Soil Map Unit Name: 21D Madison fine sandy loam 15-25% slop 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 ____		
Hydric Soil Present?	Yes ✓ No ____		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ✓ No ____

Remarks:

Covertype is PFO. Area is wetland, all three wetland parameters are present.

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):	16	Wetland Hydrology Present? Yes ✓ No ____
Saturation Present? (includes capillary fringe)	Yes ✓ No ____	Depth (inches):	4	

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

Remarks:

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

Sampling Point: W-E18-37_PFO-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	30	Yes	FAC
2. *Platanus occidentalis*	30	Yes	FACW
3.			
4.			
5.			
6.			
7.			
	60	= Total Cover	
50% of total cover: 30	20% of total cover:	12	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Liquidambar styraciflua*	20	Yes	FAC
2. *Acer rubrum*	18	Yes	FAC
3. *Platanus occidentalis*	12	Yes	FACW
4.			
5.			
6.			
7.			
8.			
9.			
	50	= Total Cover	
50% of total cover: 25	20% of total cover:	10	
Herb Stratum (Plot size: 5)			
1. *Dulichium arundinaceum*	45	Yes	OBL
2. *Carex lupulina*	20	Yes	OBL
3. *Impatiens capensis*	8	No	FACW
4. *Leersia virginica*	5	No	FACW
5. *Lycopus virginicus*	4	No	OBL
6.			
7.			
8.			
9.			
10.			
11.			
	82	= Total Cover	
50% of total cover: 41	20% of total cover:	16.4	
Woody Vine Stratum (Plot size:)			
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:	7	(A)
Total Number of Dominant Species Across All Strata:	7	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	69	x 1 =	69
FACW species	55	x 2 =	110
FAC species	68	x 3 =	204
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	192	(A)	383 (B)

Prevalence Index = B/A = 2

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 vines – 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: W-E18-37_PFO-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 4	10YR 4/2	70	7.5YR 4/4	30	C	PL	Loamy Sand	
4 - 12	2.5Y 5/1	90	7.5YR 5/4	10	C	M	Sand	
12 - 18	10Y 5/1	100						

[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: None
Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-June-27
Applicant/Owner: NextEra State: VA Sampling Point: W-E18-37_UPL-1
Investigator(s): Jenn Favela, Troy Savage, TS,SB,MS Section, Township, Range: N/A
Landform (hillslope, terrace, etc.): Foot slope Local relief (concave, convex, none): None Slope (%): 1 to 3
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5847207 Long: -79.5990478 Datum: WGS84
Soil Map Unit Name: 21D 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 ✓		
Hydric Soil Present?	Yes ____ No ✓		
Wetland Hydrology Present?	Yes ____ No ✓	Is the Sampled Area within a Wetland?	Yes ____ No ✓

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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: W-E18-37_UPL-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fagus grandifolia*	30	Yes	FACU
2. *Oxydendrum arboreum*	25	Yes	UPL
3. *Liriodendron tulipifera*	10	No	FACU
4.			
5.			
6.			
7.			
	65	= Total Cover	
50% of total cover: 32.5	20% of total cover:	13	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Liriodendron tulipifera*	40	Yes	FACU
2. *Liquidambar styraciflua*	15	Yes	FAC
3. *Platanus occidentalis*	5	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
	60	= Total Cover	
50% of total cover: 30	20% of total cover:	12	
Herb Stratum (Plot size: 5)			
1. *Polystichum acrostichoides*	7	Yes	FACU
2. *Microstegium vimineum*	5	Yes	FAC
3. *Lonicera japonica*	5	Yes	FACU
4. *Fagus grandifolia*	3	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	20	= Total Cover	
50% of total cover: 10	20% of total cover:	4	
Woody Vine Stratum (Plot size: 30)			
1. *Pueraria montana*	40	Yes	UPL
2. *Toxicodendron radicans*	5	No	FAC
3.			
4.			
5.			
	45	= Total Cover	
50% of total cover: 22.5	20% of total cover:	9	

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	5	x 2 =	10
FAC species	25	x 3 =	75
FACU species	95	x 4 =	380
UPL species	65	x 5 =	325
Column Totals	190	(A)	790 (B)
Prevalence Index = B/A =	4.2		

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 vines – 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: W-E18-37_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 10	10YR 5/4	100					Loam	
10 - 18	10YR 5/4	90	10YR 5/2	10	D	M	Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot
South

Photo of Sample Plot
West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-July-30
Applicant/Owner: NextEra State: Sampling Point: W-F18-44_PEM-1
Investigator(s): Beth Clements, SS MS Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 1 to 10
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5766576 Long: -79.5973137 Datum: WGS84
Soil Map Unit Name: 34B 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 ____		
Hydric Soil Present?	Yes ✓ No ____		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ✓ No ____

Remarks:

Covertype is PEM. Area is wetland, all three wetland parameters are present.

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):	Wetland Hydrology Present? Yes ✓ No ____
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:

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

Sampling Point: W-F18-44_PEM-1

Tree Stratum (Plot size: 20x3)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
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. *Liquidambar styraciflua*	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: 5)			
1. *Arthraxon hispidus*	25	Yes	FAC
2. *Bidens aristosa*	20	Yes	FACW
3. *Juncus effusus*	20	Yes	FACW
4. *Microstegium vimineum*	15	No	FAC
5. *Sorghum halepense*	10	No	FACU
6. *Cinna arundinacea*		No	FACW
7. *Lespedeza cuneata*	5	No	FACU
8.			
9.			
10.			
11.			
	95 = Total Cover		
50% of total cover: 47.5	20% of total cover: 19		
Woody Vine Stratum (Plot size: 20x3)			
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:	4	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species		x 2 =	
FAC species	50	x 3 =	150
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column Totals		(A)	(B)
Prevalence Index = B/A =			

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

__✓__ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Four Vegetation Strata:

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

Sapling/shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

Woody vines – 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: W-F18-44_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	10YR 6/2	85	10YR 7/1	5	D	M	Silty Clay Loam	
0 - 6			10YR 5/8	10	C	M		
6 - 18	10YR 5/2	75	10YR 6/2	5	D	M/PL	Silty Clay Loam	
6 - 18	10YR 5/8		10YR 5/8	20	C	M		

[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: None
Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-June-28
Applicant/Owner: NextEra State: Sampling Point: W-F18-44_PFO-1
Investigator(s): Janelle Bernosky, SS JF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2 to 5
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5762302 Long: -79.5972575 Datum: WGS84
Soil Map Unit Name: 34C NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Covertype is PFO. Area is wetland, all three wetland parameters are present.

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):	Wetland Hydrology Present? Yes ✓ No ____
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:

The criterion for wetland hydrology is met.

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

Sampling Point: W-F18-44_PFO-1

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus phellos*	20	Yes	FAC
2. *Acer rubrum*	20	Yes	FAC
3. *Carpinus caroliniana*	15	Yes	FAC
4. *Cornus amomum*	10	No	FACW
5. *Fraxinus pennsylvanica*	5	No	FACW
6.			
7.			
	70	= Total Cover	
50% of total cover: 35	20% of total cover:	14	

Sapling/Shrub Stratum (Plot size: 15)			
1. *Fraxinus pennsylvanica*	15	Yes	FACW
2. *Acer rubrum*	5	No	FAC
3. *Carpinus caroliniana*	5	No	FAC
4. *Liquidambar styraciflua*	3	No	FAC
5.			
6.			
7.			
8.			
9.			
	28	= Total Cover	
50% of total cover: 14	20% of total cover:	5.6	

Herb Stratum (Plot size: 5)			
1. *Microstegium vimineum*	60	Yes	FAC
2. *Amphicarpaea bracteata*	6	No	FAC
3. *Dichanthelium clandestinum*	5	No	FAC
4. *Lonicera japonica*	3	No	FACU
5. *Parthenocissus quinquefolia*	2	No	FACU
6. *Carpinus caroliniana*	2	No	FAC
7.			
8.			
9.			
10.			
11.			
	78	= Total Cover	
50% of total cover: 39	20% of total cover:	15.6	

Woody Vine Stratum (Plot size:)			
1. *Vitis rotundifolia*	15	Yes	FAC
2.			
3.			
4.			
5.			
	15	= Total Cover	
50% of total cover: 7.5	20% of total cover:	3	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	6	(A)
Total Number of Dominant Species Across All Strata:	6	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	156	x 3 =	468
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals	191 (A)		548 (B)
Prevalence Index = B/A =	2.9		

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 vines – 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.)

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

SOIL

Sampling Point: W-F18-44_PFO-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 9	10YR 4/2	80	10YR 5/8	15	C	M/PL	Loam	
0 - 9	10YR 4/1		10YR 4/1	5	D	M		
9 - 18	10YR 4/2	10	10YR 5/6	10	C	M	Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Westover, Pittsylvania… Sampling Date: 2018-June-28
Applicant/Owner: NextEra State: Virginia Sampling Point: W-F18-44_UPL-1
Investigator(s): Janelle Bernosky, SS JF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 1 to 3
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.576124 Long: -79.5972168 Datum: WGS84
Soil Map Unit Name: 34B 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 ____		
Hydric Soil Present?	Yes ____ No ✓		
Wetland Hydrology Present?	Yes ____ No ✓	Is the Sampled Area within a Wetland?	Yes ____ No ✓

Remarks:

Covertype is UPL.

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: W-F18-44_UPL-1

Tree Stratum (Plot size: 5' × 40')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus phellos*	30	Yes	FAC
2. *Quercus alba*	20	Yes	FACU
3. *Cornus amomum*	20	Yes	FACW
4.			
5.			
6.			
7.			
	70	= Total Cover	
50% of total cover: 35	20% of total cover:	14	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Liquidambar styraciflua*	30	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	30	= Total Cover	
50% of total cover: 15	20% of total cover:	6	
Herb Stratum (Plot size: 5)			
1. *Microstegium vimineum*	80	Yes	FAC
2. *Lonicera japonica*	15	No	FACU
3. *Verbesina alternifolia*	10	No	FAC
4. *Smilax rotundifolia*	1	No	FAC
5. *Fraxinus pennsylvanica*	1	No	FACW
6.			
7.			
8.			
9.			
10.			
11.			
	107	= Total Cover	
50% of total cover: 53.5	20% of total cover:	21.4	
Woody Vine Stratum (Plot size: 5' x 40')			
1. *Toxicodendron radicans*	40	Yes	FAC
2. *Smilax rotundifolia*	40	Yes	FAC
3. *Lonicera japonica*	20	Yes	FACU
4.			
5.			
	100	= Total Cover	
50% of total cover: 50	20% of total cover:	20	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	6	(A)
Total Number of Dominant Species Across All Strata:	8	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	75	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	21	x 2 =	42
FAC species	231	x 3 =	693
FACU species	55	x 4 =	220
UPL species	0	x 5 =	0
Column Totals	307	(A)	955 (B)
Prevalence Index = B/A =	3.1		

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 vines – 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.)

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

SOIL

Sampling Point: W-F18-44_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 18	10YR 4/6	100					Silt Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-June-28
Applicant/Owner: NextEra State: Sampling Point: W-F18-41_PFO-2
Investigator(s): Janelle Bernosky, JF, SS Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 5 to 10
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5736612 Long: -79.5991735 Datum: WGS84
Soil Map Unit Name: 23D 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 ____		
Hydric Soil Present?	Yes ✓ No ____		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ✓ No ____

Remarks:

Covertype is PFO. Area is wetland, all three wetland parameters are present.

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):	12

Wetland Hydrology Present? Yes ✓ No ____

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

Remarks:

The criterion for wetland hydrology is met.

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

Sampling Point: W-F18-41_PFO-2

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Betula nigra*	10	Yes	FACW
2. *Carpinus caroliniana*	10	Yes	FAC
3. *Acer rubrum*	5	No	FAC
4. *Quercus alba*	10	Percent cover cannot be greater than a previous species	FACU
5.			
6.			
7.			
	35	= Total Cover	
50% of total cover: 17.5	20% of total cover:		7

Sapling/Shrub Stratum (Plot size: 15)			
1.			
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. *Dulichium arundinaceum*	10	Yes	OBL
2. *Amphicarpaea bracteata*	5	Yes	FAC
3. *Polystichum acrostichoides*	2	No	FACU
4. *Fraxinus pennsylvanica*	2	No	FACW
5. *Liquidambar styraciflua*	1	No	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	20	= Total Cover	
50% of total cover: 10	20% of total cover:		4

Woody Vine Stratum (Plot size:)			
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:	4	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	10	x 1 =	10
FACW species	12	x 2 =	24
FAC species	21	x 3 =	63
FACU species	12	x 4 =	48
UPL species	0	x 5 =	0
Column Totals	55	(A)	145 (B)
Prevalence Index = B/A =	2.6		

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 vines – 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.)

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

SOIL

Sampling Point: W-F18-41_PFO-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 2	10YR 4/3	85	10YR 4/6	15	C	M	Loamy Sand	
2 - 12	10YR 4/2	80	7.5YR 4/6	15	C	M/PL	Loamy Sand	
2 - 12			10YR 4/1	5	D	M	Loamy Sand	
12 - 18	10YR 4/3	85	7.5YR 4/6	15	C	M	Loamy Sand	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

The criterion for hydric soil is met.

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-June-28
Applicant/Owner: NextEra State: Sampling Point: W-F18-41_PSS-1
Investigator(s): Janelle Bernosky, TS, JSF, ESN Section, Township, Range:
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 1 to 3
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5736831 Long: -79.5993823 Datum: WGS84
Soil Map Unit Name: 23D 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 ____		
Hydric Soil Present?	Yes ✓ No ____		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ✓ No ____

Remarks:

Covertype is PSS. Area is wetland, all three wetland parameters are present.

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):	12

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: W-F18-41_PSS-1

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
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. *Platanus occidentalis*	15	Yes	FACW
2. *Fagus grandifolia*	15	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	30	= Total Cover	
50% of total cover: 15	20% of total cover: 6		
Herb Stratum (Plot size: 5)			
1. *Microstegium vimineum*	20	Yes	FAC
2. *Amphicarpaea bracteata*	20	Yes	FAC
3. *Dichanthelium clandestinum*	15	Yes	FAC
4. *Boehmeria cylindrica*	2	No	FACW
5. *Acer rubrum*	1	No	FAC
6.			
7.			
8.			
9.			
10.			
11.			
	58	= Total Cover	
50% of total cover: 29	20% of total cover: 11.6		
Woody Vine Stratum (Plot size:)			
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	0	x 1 =	0
FACW species	17	x 2 =	34
FAC species	56	x 3 =	168
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column Totals	88	(A)	262 (B)
Prevalence Index = B/A =	3		

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 vines – 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: W-F18-41_PSS-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 2	10YR 4/3	90	7.5YR 4/6	10	C	M	Sandy Loam	
2 - 10	10YR 4/4	80	10YR 4/2	10	D	M	Sand	
2 - 10			10YR 5/6	10	C	M		
10 - 20	10YR 3/2	70	2.5YR 4/6	20	C	M/PL	Silty Clay Loam	
10 - 20			7.5YR 4/3	10	C	M		

[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: None
Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-June-28
Applicant/Owner: NextEra State: Sampling Point: W-F18-41_UPL-1
Investigator(s): Janelle Bernosky, EN, SS Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 1 to 3
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5737501 Long: -79.5995577 Datum: WGS84
Soil Map Unit Name: 23D 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 ✓		
Hydric Soil Present?	Yes ____ No ✓		
Wetland Hydrology Present?	Yes ____ No ✓	Is the Sampled Area within a Wetland?	Yes ____ No ✓

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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: W-F18-41_UPL-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fagus grandifolia*	20	Yes	FACU
2. *Betula nigra*	10	Yes	FACW
3. *Fraxinus pennsylvanica*	5	No	FACW
4.			
5.			
6.			
7.			
	35	= Total Cover	
50% of total cover: 17.5	20% of total cover:	7	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Liquidambar styraciflua*	20	Yes	FAC
2. *Fagus grandifolia*	15	Yes	FACU
3. *Cornus florida*	5	No	FACU
4. *Fraxinus pennsylvanica*	5	No	FACW
5.			
6.			
7.			
8.			
9.			
	45	= Total Cover	
50% of total cover: 22.5	20% of total cover:	9	
Herb Stratum (Plot size: 5)			
1. *Amphicarpaea bracteata*	20	Yes	FAC
2. *Microstegium vimineum*	5	No	FAC
3. *Galium aparine*	1	No	FACU
4. *Acer rubrum*	1	No	FAC
5. *Parthenocissus quinquefolia*	1	No	FACU
6. *Polystichum acrostichoides*	1	No	FACU
7.			
8.			
9.			
10.			
11.			
	29	= Total Cover	
50% of total cover: 14.5	20% of total cover:	5.8	
Woody Vine Stratum (Plot size: 30)			
1. *Lonicera japonica*	5	Yes	FACU
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:	6	(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	20	x 2 =	40
FAC species	46	x 3 =	138
FACU species	48	x 4 =	192
UPL species	0	x 5 =	0
Column Totals	114	(A)	370 (B)
Prevalence Index = B/A =	3.2		

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 vines – 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: W-F18-41_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 2	10YR 3/3	100					Loamy Sand	
2 - 8	10YR 4/3	100					Sandy Loam	
8 - 12	10YR 4/4	100					Sandy Loam	
12 - 18	10YR 5/4	100					Loamy Sand	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot
South

Photo of Sample Plot
West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-June-27
Applicant/Owner: NextEra State: Sampling Point: W-F18-37_PFO-1
Investigator(s): Janelle Bernosky, TS, JSF, ESN Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1 to 3
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.566386 Long: -79.6009192 Datum: WGS84
Soil Map Unit Name: 23C 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 ____		
Hydric Soil Present?	Yes ✓ No ____		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ✓ No ____

Remarks:

Covertype is PFO. Area is wetland, all three wetland parameters are present.

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):		Wetland Hydrology Present? Yes ✓ No ____
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):		

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

Remarks:

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

Sampling Point: W-F18-37_PFO-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	20	Yes	FACW
2. *Acer rubrum*	20	Yes	FAC
3. *Liquidambar styraciflua*	20	Yes	FAC
4. *Carpinus caroliniana*	15	No	FAC
5. *Quercus alba*	5	No	FACU
6.			
7.			
	80	= Total Cover	
50% of total cover: 40	20% of total cover:	16	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Liquidambar styraciflua*	5	Yes	FAC
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: 5)			
1. *Smilax rotundifolia*	5	Yes	FAC
2. *Fraxinus pennsylvanica*	1	No	FACW
3. *Carex sp.*		No	NI
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	6	= Total Cover	
50% of total cover: 3	20% of total cover:	1.2	
Woody Vine Stratum (Plot size: 30)			
1. *Smilax rotundifolia*	15	Yes	FAC
2.			
3.			
4.			
5.			
	15	= Total Cover	
50% of total cover: 7.5	20% of total cover:	3	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	6	(A)
Total Number of Dominant Species Across All Strata:	6	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	21	x 2 =	42
FAC species	80	x 3 =	240
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals	106 (A)		302 (B)
Prevalence Index = B/A =	2.8		

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤ 3.0[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 vines – 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: W-F18-37_PFO-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 16	10YR 5/2	95	7.5YR 5/8	5	C	M	Silt Loam	
16 - 18	10YR 5/2	80	2.5YR 4/6	20	C	M	Silty Clay Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-June-27
Applicant/Owner: NextEra State: Sampling Point: W-F18-37_UPL-1
Investigator(s): Janelle Bernosky, TS, JSF, ESN Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10 to 15
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5663819 Long: -79.6009781 Datum: WGS84
Soil Map Unit Name: 23C 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 ____		
Hydric Soil Present?	Yes ____ No ✓		
Wetland Hydrology Present?	Yes ____ No ✓	Is the Sampled Area within a Wetland?	Yes ____ No ✓

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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: W-F18-37_UPL-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Carpinus caroliniana*	20	Yes	FAC
2. *Quercus alba*	15	Yes	FACU
3. *Prunus serotina*	8	No	FACU
4. *Pinus taeda*	5	No	FAC
5. *Fraxinus pennsylvanica*	2	No	FACW
6.			
7.			
	50	= Total Cover	
50% of total cover: 25	20% of total cover:	10	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Carpinus caroliniana*	8	Yes	FAC
2. *Fraxinus pennsylvanica*	5	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	13	= Total Cover	
50% of total cover: 6.5	20% of total cover:	2.6	
Herb Stratum (Plot size: 5)			
1. *Lonicera japonica*	10	Yes	FACU
2. *Smilax rotundifolia*	10	Yes	FAC
3. *Parthenocissus quinquefolia*	3	No	FACU
4. *Dichanthelium scoparium*		No	FACW
5. *Microstegium vimineum*	2	No	FAC
6. *Viola sagittata*		No	FAC
7. *Carex sp.*		No	NI
8. *Carpinus caroliniana*	1	No	FAC
9.			
10.			
11.			
	26	= Total Cover	
50% of total cover: 13	20% of total cover:	5.2	
Woody Vine Stratum (Plot size: 30)			
1. *Toxicodendron radicans*	20	Yes	FAC
2. *Smilax rotundifolia*	10	Yes	FAC
3.			
4.			
5.			
	30	= Total Cover	
50% of total cover: 15	20% of total cover:	6	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	6	(A)
Total Number of Dominant Species Across All Strata:	8	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	75	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species		x 2 =	
FAC species		x 3 =	
FACU species	36	x 4 =	144
UPL species	0	x 5 =	0
Column Totals		(A)	(B)
Prevalence Index = B/A =			

Hydrophytic Vegetation Indicators:

____ 1- Rapid Test for Hydrophytic Vegetation

_✓_ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤ 3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Four Vegetation Strata:

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

Sapling/shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

Woody vines – 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: W-F18-37_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 2	7.5YR 3/3	100					Loam	
2 - 18	2.5YR 4/3	100					Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Cascade, Pittsylvania … Sampling Date: 2018-July-30
Applicant/Owner: NextEra State: Virginia Sampling Point: W-G18-16_PEM-1
Investigator(s): Beth Clements, SS MS Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 5 to 10
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5704678 Long: -79.6034426 Datum: WGS84
Soil Map Unit Name: 23C 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 ____		
Hydric Soil Present?	Yes _✓_ No ____		
Wetland Hydrology Present?	Yes _✓_ No ____	Is the Sampled Area within a Wetland?	Yes _✓_ No ____

Remarks:

Covertype is PEM. Area is wetland, all three wetland parameters are present.

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: W-G18-16_PEM-1

Tree Stratum (Plot size: 20x3)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		
Sapling/Shrub Stratum (Plot size: 10x3)			
1.			
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. *Murdannia keisak*	95	Yes	OBL
2. *Leersia oryzoides*	15	No	OBL
3. *Bidens aristosa*	5	No	FACW
4. *Arthraxon hispidus*	5	No	FAC
5. *Juncus effusus*	5	No	FACW
6. *Persicaria sagittata*	2	No	OBL
7. *Persicaria longiseta*	1	No	FAC
8. *Eupatorium perfoliatum*	1	No	FACW
9.			
10.			
11.			
	129 = Total Cover		
50% of total cover: 64.5	20% of total cover: 25.8		
Woody Vine Stratum (Plot size: 20x3)			
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	112	x 1 =	112
FACW species	11	x 2 =	22
FAC species	6	x 3 =	18
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	129	(A)	152 (B)
Prevalence Index = B/A =	1.2		

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 vines – 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: W-G18-16_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	10YR 4/2	80	2.5YR 3/6	20	C	M/PL	Silt Loam	
6 - 10	10YR 4/1	70	7.5YR 4/6	30	C	M/PL	Sandy Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: Rock layer
Depth (inches): 10

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-July-30
Applicant/Owner: NextEra State: Sampling Point: W-G18-16_UPL-1
Investigator(s): Beth Clements, SS MS Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): None Slope (%): 1 to 10
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5705512 Long: -79.6034039 Datum: WGS84
Soil Map Unit Name: 23C 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 ✓		
Hydric Soil Present?	Yes ____ No ✓		
Wetland Hydrology Present?	Yes ____ No ✓	Is the Sampled Area within a Wetland?	Yes ____ No ✓

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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: W-G18-16_UPL-1

Tree Stratum (Plot size: 20x3)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		
Sapling/Shrub Stratum (Plot size: 10x3)			
1.			
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. *Dichanthelium clandestinum*	40	Yes	FAC
2. *Sorghum halepense*	20	Yes	FACU
3. *Microstegium vimineum*	15	No	FAC
4. *Arthraxon hispidus*	5	No	FAC
5. *Dactylis glomerata*	5	No	FACU
6. *Bidens aristosa*	2	No	FACW
7. *Cinna arundinacea*	2	No	FACW
8. *Liquidambar styraciflua*	1	No	FAC
9.			
10.			
11.			
	90 = Total Cover		
50% of total cover: 45	20% of total cover: 18		
Woody Vine Stratum (Plot size: 20x3)			
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:	2	(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	4	x 2 =	8
FAC species	61	x 3 =	183
FACU species	25	x 4 =	100
UPL species	0	x 5 =	0
Column Totals	90	(A)	291 (B)
Prevalence Index = B/A =	3.2		

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 vines – 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: W-G18-16_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 4	10YR 5/3	95	10YR 5/6	5	C	M	Sandy Loam	
4 - 13	10YR 5/4	90	2.5YR 5/3	5	C	M	Sandy Loam	
4 - 13			10YR 5/8	5	C	M		
13 - 18	10YR 6/4	90	10YR 5/8	8	D	M	Sandy Loam	
13 - 18			10YR 5/3	2	D	M		
-								
-								
-								
-								

[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: None

Depth (inches):

Hydric Soil Present? **Yes** ☐ **No** ☑

Remarks:

Photo of Sample Plot North

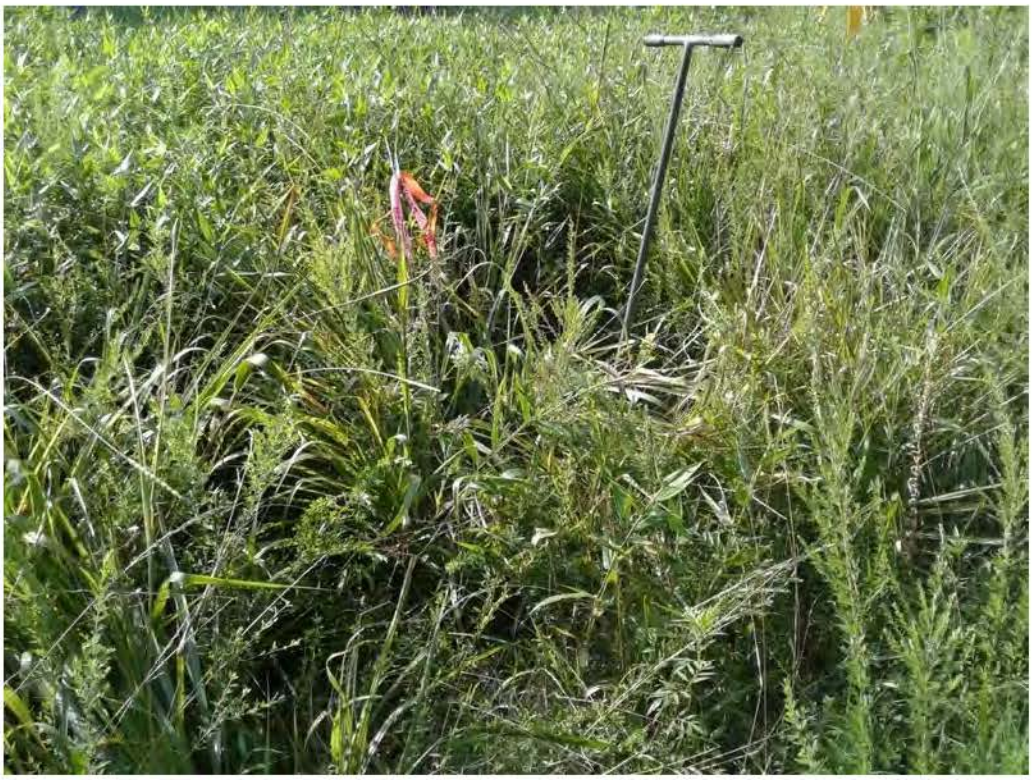


Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-June-26
Applicant/Owner: NextEra State: Sampling Point: W-E18-36_PFO-1
Investigator(s): Jen Feese, ESN, JSF, TS, JB Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 10 to 15
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5675648 Long: -79.6056945 Datum: WGS84
Soil Map Unit Name: 23C 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 ____		
Hydric Soil Present?	Yes _✓_ No ____		
Wetland Hydrology Present?	Yes _✓_ No ____	Is the Sampled Area within a Wetland?	Yes _✓_ No ____

Remarks:

Covertype is PFO. Area is wetland, all three wetland parameters are present.

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):	4

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: W-E18-36_PFO-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	25	Yes	FACW
2. *Quercus alba*	10	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	35	= Total Cover	
50% of total cover: 17.5	20% of total cover:	7	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Platanus occidentalis*	5	Yes	FACW
2. *Acer rubrum*	5	Yes	FAC
3. *Fraxinus pennsylvanica*	5	Yes	FACW
4.			
5.			
6.			
7.			
8.			
9.			
	15	= Total Cover	
50% of total cover: 7.5	20% of total cover:	3	
Herb Stratum (Plot size: 5)			
1. *Leersia oryzoides*	30	Yes	OBL
2. *Lonicera japonica*	10	No	FACU
3. *Smilax rotundifolia*	5	No	FAC
4. *Carpinus caroliniana*	5	No	FAC
5. *Smilax glauca*	2	No	FACU
6. *Osmorhiza claytonii*	1	No	FACU
7.			
8.			
9.			
10.			
11.			
	53	= Total Cover	
50% of total cover: 26.5	20% of total cover:	10.6	
Woody Vine Stratum (Plot size: 30)			
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:	5	(A)
Total Number of Dominant Species Across All Strata:	6	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	83.3	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	30	x 1 =	30
FACW species	35	x 2 =	70
FAC species	15	x 3 =	45
FACU species	23	x 4 =	92
UPL species	0	x 5 =	0
Column Totals	103	(A)	237 (B)

Prevalence Index = B/A = 2.3

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 vines – 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: W-E18-36_PFO-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 2	10YR 4/1	85	10YR 5/1	10	D	M	Loam	
0 - 2			7.5YR 4/4	5	C	M		
2 - 8	10YR 4/2	85	10YR 5/1	5	D	M	Silt Loam	
2 - 8			7.5YR 4/4	10	C	M/PL		
8 - 12	7.5YR 4/4	90	7.5YR 4/4	10	C	M	Silty Clay Loam	
12 - 18	2.5Y 5/3	60	10YR 5/6	15	C	M	Silty Clay Loam	
12 - 18			7.5YR 4/4	15	C	M		
12 - 18			10YR 4/2	10	D	M		

[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: None
Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot
South

Photo of Sample Plot
West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-June-26
Applicant/Owner: NextEra State: Sampling Point: W-E18-36_UPL-1
Investigator(s): Janelle Bernosky, TS Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 2 to 5
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5676098 Long: -79.6057995 Datum: WGS84
Soil Map Unit Name: NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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: W-E18-36_UPL-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus taeda*	35	Yes	FAC
2. *Liquidambar styraciflua*	30	Yes	FAC
3. *Carya ovata*	20	Yes	FACU
4. *Fagus grandifolia*	15	No	FACU
5.			
6.			
7.			
	100	= Total Cover	
50% of total cover: 50	20% of total cover:	20	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Carya ovata*	15	Yes	FACU
2. *Liquidambar styraciflua*	10	Yes	FAC
3. *Quercus alba*	10	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
	35	= Total Cover	
50% of total cover: 17.5	20% of total cover:	7	
Herb Stratum (Plot size: 5)			
1. *Lonicera japonica*	15	Yes	FACU
2. *Smilax hispida*	15	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	30	= Total Cover	
50% of total cover: 15	20% of total cover:	6	
Woody Vine Stratum (Plot size:)			
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:	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	0	x 2 =	0
FAC species	90	x 3 =	270
FACU species	75	x 4 =	300
UPL species	0	x 5 =	0
Column Totals	165	(A)	570 (B)
Prevalence Index = B/A =	3.5		

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 vines – 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: W-E18-36_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 10	10YR 5/2	100					Loam	
10 - 18	2.5Y 5/3	100					Fine Sandy Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Danville, Pittsylvania C... Sampling Date: 2018-July-30
Applicant/Owner: NextEra State: VA Sampling Point: W-F18-36_PEM-1
Investigator(s): Beth Clements, JDF, AJW Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 1 to 3
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.567389 Long: -79.6065858 Datum: WGS84
Soil Map Unit Name: 23C 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 ____		
Hydric Soil Present?	Yes ✓ No ____		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ✓ No ____

Remarks:

Covertype is PEM. Area is wetland, all three wetland parameters are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ✓ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____ No ✓	Depth (inches):			
Water Table Present?	Yes ✓ No ____	Depth (inches):	10	Wetland Hydrology Present?	Yes ✓ No ____
Saturation Present? (includes capillary fringe)	Yes ✓ No ____	Depth (inches):	0		

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

Remarks:

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

Sampling Point: W-F18-36_PEM-1

Tree Stratum (Plot size: 10x20)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
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. *Salix nigra*	5	Yes	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: 5)			
1. *Leersia oryzoides*	80	Yes	OBL
2. *Microstegium vimineum*	45	Yes	FAC
3. *Persicaria sagittata*	15	No	OBL
4. *Phalaris arundinacea*	15	No	FACW
5. *Dichanthelium clandestinum*	5	No	FAC
6. *Amphicarpaea bracteata*	5	No	FAC
7.			
8.			
9.			
10.			
11.			
	165	= Total Cover	
50% of total cover: 82.5	20% of total cover:	33	
Woody Vine Stratum (Plot size: 30)			
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:	3	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	100	x 1 =	100
FACW species	15	x 2 =	30
FAC species	55	x 3 =	165
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	170	(A)	295 (B)
Prevalence Index = B/A =	1.7		

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 vines – 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: W-F18-36_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	10YR 5/2	80	7.5YR 3/4	20	C	M/PL	Clay Loam	
6 - 10	10YR 4/1	90	10YR 4/6	10	C	M	Silty Clay Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: Rock
Depth (inches): 10

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-June-26
Applicant/Owner: NextEra State: Sampling Point: W-F18-36_PFO-1
Investigator(s): Jenn Favela, SS,SB Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 5 to 10
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5673582 Long: -79.6063412 Datum: WGS84
Soil Map Unit Name: 23C: Mayodan fine sandy loam; 7-15% slope 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 ____		
Hydric Soil Present?	Yes ✓ No ____		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ✓ No ____

Remarks:

Covertype is PFO. Area is wetland, all three wetland parameters are present.

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):	Wetland Hydrology Present? Yes ✓ No ____
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:

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

Sampling Point: W-F18-36_PFO-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus alba*	10	Yes	FACU
2. *Quercus phellos*	10	Yes	FAC
3. *Platanus occidentalis*	10	Yes	FACW
4.			
5.			
6.			
7.			
	30	= Total Cover	
50% of total cover: 15	20% of total cover:	6	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Cercis canadensis*	5	Yes	FACU
2. *Carya ovata*	1	No	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	6	= Total Cover	
50% of total cover: 3	20% of total cover:	1.2	
Herb Stratum (Plot size: 5)			
1. *Dichanthelium scoparium*	30	Yes	FACW
2. *Microstegium vimineum*	10	Yes	FAC
3. *Amphicarpaea bracteata*	8	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	48	= Total Cover	
50% of total cover: 24	20% of total cover:	9.6	
Woody Vine Stratum (Plot size: 30)			
1. *Lonicera japonica*	10	Yes	FACU
2.			
3.			
4.			
5.			
	10	= Total Cover	
50% of total cover: 5	20% of total cover:	2	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	4	(A)
Total Number of Dominant Species Across All Strata:	7	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	57.1	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	40	x 2 =	80
FAC species	28	x 3 =	84
FACU species	26	x 4 =	104
UPL species	0	x 5 =	0
Column Totals	94	(A)	268 (B)
Prevalence Index = B/A =	2.9		

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 vines – 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: W-F18-36_PFO-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 9	10YR 5/2	90	2.5YR 4/6	10	C	M	Silt Loam	
9 - 14	2.5Y 4/1	93	10YR 4/4	7	C	M	Loamy Sand	
14 - 18	2.5Y 5/1	95	2.5Y 7/6	5	C	M	Loamy Sand	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-June-26
Applicant/Owner: NextEra State: Sampling Point: W-F18-36_UPL-1
Investigator(s): Jenn Favela, ESN, JSF Section, Township, Range:
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 1 to 3
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.567368 Long: -79.6062721 Datum: WGS84
Soil Map Unit Name: Mayodan fine sandy loam: 7-15% slope 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 ____		
Hydric Soil Present?	Yes ____ No ✓		
Wetland Hydrology Present?	Yes ____ No ✓	Is the Sampled Area within a Wetland?	Yes ____ No ✓

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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: W-F18-36_UPL-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Carya ovata*	30	Yes	FACU
2. *Platanus occidentalis*	15	Yes	FACW
3. *Liquidambar styraciflua*	15	Yes	FAC
4. *Carpinus caroliniana*	5	No	FAC
5.			
6.			
7.			
	65	= Total Cover	
50% of total cover: 32.5	20% of total cover:	13	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Carya ovata*	20	Yes	FACU
2. *Elaeagnus umbellata*	1	No	NI
3. *Fraxinus pennsylvanica*	1	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
	22	= Total Cover	
50% of total cover: 11	20% of total cover:	4.4	
Herb Stratum (Plot size: 5)			
1. *Carpinus caroliniana*	5	Yes	FAC
2. *Carex sp.*	5	Yes	NI
3. *Toxicodendron radicans*	3	Yes	FAC
4. *Cercis canadensis*	2	No	FACU
5. *Lonicera japonica*	2	No	FACU
6. *Vitis rotundifolia*	2	No	FAC
7. *Juniperus virginiana*	1	No	FACU
8. *Dichanthelium scoparium*	1	No	FACW
9. *Quercus alba*	1	No	FACU
10. *Smilax glauca*	1	No	FACU
11.			
	23	= Total Cover	
50% of total cover: 11.5	20% of total cover:	4.6	
Woody Vine Stratum (Plot size: 30)			
1. *Toxicodendron radicans*	30	Yes	FAC
2.			
3.			
4.			
5.			
	30	= Total Cover	
50% of total cover: 15	20% of total cover:	6	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	5	(A)
Total Number of Dominant Species Across All Strata:	8	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	62.5	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	17	x 2 =	34
FAC species	60	x 3 =	180
FACU species	57	x 4 =	228
UPL species	0	x 5 =	0
Column Totals	134 (A)		442 (B)
Prevalence Index = B/A =	3.3		

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 vines – 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: W-F18-36_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 12	10YR 4/6	100					Loamy Sand	
12 - 18	10YR 4/4	100					Loamy Sand	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-June-26
Applicant/Owner: NextEra State: Sampling Point: W-E18-31_PFO-1
Investigator(s): Janelle Bernosky, TS Section, Township, Range:
Landform (hillslope, terrace, etc.): Flood Plain Local relief (concave, convex, none): Concave Slope (%): 1 to 3
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5618953 Long: -79.6028297 Datum: WGS84
Soil Map Unit Name: 23C 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 ____		
Hydric Soil Present?	Yes ✓ No ____		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ✓ No ____

Remarks:

Covertype is PFO. Area is wetland, all three wetland parameters are present.

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):	Wetland Hydrology Present? Yes ✓ No ____
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:

The criterion for wetland hydrology is met.

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

Sampling Point: W-E18-31_PFO-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	30	Yes	FAC
2. *Celtis occidentalis*	20	Yes	FACU
3. *Acer negundo*	20	Yes	FAC
4. *Platanus occidentalis*	18	No	FACW
5. *Fraxinus pennsylvanica*	15	No	FACW
6.			
7.			
	103	= Total Cover	
50% of total cover: 51.5	20% of total cover:	20.6	

Sapling/Shrub Stratum (Plot size: 15)			
1. *Fraxinus pennsylvanica*	18	Yes	FACW
2. *Acer negundo*	15	Yes	FAC
3. *Ligustrum sinense*	12	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
	45	= Total Cover	
50% of total cover: 22.5	20% of total cover:	9	

Herb Stratum (Plot size: 5)			
1. *Persicaria virginiana*	5	Yes	FAC
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:)			
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:	5	(A)
Total Number of Dominant Species Across All Strata:	7	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	71.4	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	51	x 2 =	102
FAC species	70	x 3 =	210
FACU species	32	x 4 =	128
UPL species	0	x 5 =	0
Column Totals	153	(A)	440 (B)
Prevalence Index = B/A =	2.9		

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 vines – 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: W-E18-31_PFO-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 5	10YR 4/2	85	10YR 4/6	15	C	PL	Loam	
5 - 15	10YR 4/2	85	7.5YR 5/6	15	C	M	Loam	
15 - 18	7.5YR 3/3	75	7.5YR 4/6	25	C	M/PL	Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot
South

Photo of Sample Plot
West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Danville, Pittsylvania C... Sampling Date: 2018-June-26
Applicant/Owner: NextEra State: Virginia Sampling Point: W-E18-31_UPL-1
Investigator(s): Jen Feese, TS, JSF, ESN Section, Township, Range:
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): 5 to 10
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5617102 Long: -79.6024467 Datum: WGS84
Soil Map Unit Name: 23c 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 ____		
Hydric Soil Present?	Yes ____ No ✓		
Wetland Hydrology Present?	Yes ____ No ✓	Is the Sampled Area within a Wetland?	Yes ____ No ✓

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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):	Wetland Hydrology Present? Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:

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

Sampling Point: W-E18-31_UPL-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Carpinus caroliniana*	30	Yes	FAC
2. *Quercus rubra*	25	Yes	FACU
3. *Fraxinus pennsylvanica*	15	Yes	FACW
4. *Cornus florida*	5	No	FACU
5.			
6.			
7.			
	75	= Total Cover	
50% of total cover: 37.5	20% of total cover:	15	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Carpinus caroliniana*	15	Yes	FAC
2. *Liquidambar styraciflua*	5	Yes	FAC
3. *Carya glabra*	4	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
	24	= Total Cover	
50% of total cover: 12	20% of total cover:	4.8	
Herb Stratum (Plot size: 5)			
1. *Fabaceae*	10	Yes	NI
2. *Smilax bona-nox*	10	Yes	FACU
3. *Cornus florida*	7	Yes	FACU
4. *Lonicera japonica*	5	No	FACU
5. *Smilax rotundifolia*	4	No	FAC
6. *Carpinus caroliniana*	4	No	FAC
7. *Parthenocissus quinquefolia*	3	No	FACU
8. *Galium circaezans*	1	No	UPL
9.			
10.			
11.			
	44	= Total Cover	
50% of total cover: 22	20% of total cover:	8.8	
Woody Vine Stratum (Plot size: 30)			
1. *Toxicodendron radicans*	5	Yes	FAC
2. *Smilax rotundifolia*	2	Yes	FAC
3.			
4.			
5.			
	7	= Total Cover	
50% of total cover: 3.5	20% of total cover:	1.4	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	6	(A)
Total Number of Dominant Species Across All Strata:	10	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	60	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	15	x 2 =	30
FAC species	65	x 3 =	195
FACU species	59	x 4 =	236
UPL species	1	x 5 =	5
Column Totals	140	(A)	466 (B)
Prevalence Index = B/A =	3.3		

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 vines – 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: W-E18-31_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 2	10YR 4/3	100					Loam	
2 - 18	10YR 4/4	100					Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-June-26
Applicant/Owner: NextEra State: Sampling Point: W-E18-33_PFO-1
Investigator(s): Janelle Bernosky, TS Section, Township, Range:
Landform (hillslope, terrace, etc.): Foot slope Local relief (concave, convex, none): Concave Slope (%): 1 to 3
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5658846 Long: -79.6071374 Datum: WGS84
Soil Map Unit Name: 23C 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 ____		
Hydric Soil Present?	Yes ✓ No ____		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ✓ No ____

Remarks:

Covertype is PFO. Area is wetland, all three wetland parameters are present.

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):	8

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: W-E18-33_PFO-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Liquidambar styraciflua*	45	Yes	FAC
2. *Fraxinus pennsylvanica*	25	Yes	FACW
3. *Ulmus rubra*	15	No	FAC
4.			
5.			
6.			
7.			
	85	= Total Cover	
50% of total cover: 42.5	20% of total cover:	17	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Fraxinus pennsylvanica*	15	Yes	FACW
2.			
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: 5)			
1. *Microstegium vimineum*	60	Yes	FAC
2. *Smilax rotundifolia*	15	No	FAC
3. *Elymus virginicus*	8	No	FACW
4. *Vitis vulpina*	5	No	FAC
5. *Parthenocissus quinquefolia*	5	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	93	= Total Cover	
50% of total cover: 46.5	20% of total cover:	18.6	
Woody Vine Stratum (Plot size: 30)			
1. *Vitis vulpina*	25	Yes	FAC
2. *Lonicera japonica*	15	Yes	FACU
3.			
4.			
5.			
	40	= Total Cover	
50% of total cover: 20	20% of total cover:	8	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	5	(A)
Total Number of Dominant Species Across All Strata:	6	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	83.3	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	48	x 2 =	96
FAC species	165	x 3 =	495
FACU species	20	x 4 =	80
UPL species	0	x 5 =	0
Column Totals	233	(A)	671 (B)
Prevalence Index = B/A =	2.9		

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 vines – 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: W-E18-33_PFO-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 3	10YR 3/1	100					Loam	
3 - 16	10YR 5/1	80	10YR 4/2	20	D	M	Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: Rock layer
Depth (inches): 16

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Photo of Sample Plot North

Photo of Sample Plot
East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Sampling Date: 2018-June-26
Applicant/Owner: NextEra State: Sampling Point: W-E18-33_UPL-1
Investigator(s): Janelle Bernosky, TS, JSF, ESN Section, Township, Range:
Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 10 to 15
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5657787 Long: -79.6071926 Datum: WGS84
Soil Map Unit Name: 23C 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 ____		
Hydric Soil Present?	Yes ____ No ✓		
Wetland Hydrology Present?	Yes ____ No ✓	Is the Sampled Area within a Wetland?	Yes ____ No ✓

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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):	Wetland Hydrology Present? Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:

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

Sampling Point: W-E18-33_UPL-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	35	Yes	FACW
2. *Platanus occidentalis*	15	Yes	FACW
3. *Fraxinus pennsylvanica*	2	No	FACW
4.			
5.			
6.			
7.			
	52	= Total Cover	
50% of total cover: 26	20% of total cover:	10.4	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Diospyros virginiana*	5	Yes	FAC
2. *Cercis canadensis*	5	Yes	FACU
3. *Carya ovata*	3	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
	13	= Total Cover	
50% of total cover: 6.5	20% of total cover:	2.6	
Herb Stratum (Plot size: 5)			
1. *Fabaceae*	50	Yes	NI
2. *Microstegium vimineum*	50	Yes	FAC
3. *Boehmeria cylindrica*	3	No	FACW
4. *Smilax rotundifolia*	1	No	FAC
5. *Cercis canadensis*	1	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	105	= Total Cover	
50% of total cover: 52.5	20% of total cover:	21	
Woody Vine Stratum (Plot size: 30)			
1. *Toxicodendron radicans*	20	Yes	FAC
2. *Vitis vulpina*	7	Yes	FAC
3.			
4.			
5.			
	27	= Total Cover	
50% of total cover: 13.5	20% of total cover:	5.4	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	6	(A)
Total Number of Dominant Species Across All Strata:	9	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	66.7	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	55	x 2 =	110
FAC species	83	x 3 =	249
FACU species	9	x 4 =	36
UPL species	0	x 5 =	0
Column Totals	147	(A)	395 (B)
Prevalence Index = B/A =	2.7		

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 vines – 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: W-E18-33_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 11	10YR 4/3	100					Loam	
11 - 14	10YR 5/4	80	10YR 4/4	20	C	M	Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: Gravel
Depth (inches): 14

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Danville, Pittsylvania Sampling Date: 2018-July-30
Applicant/Owner: NextEra State: VA Sampling Point: W-F18-60_PEM-1
Investigator(s): Beth Clements, JDF, AJW Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 1 to 3
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5573158 Long: -79.616433 Datum: WGS84
Soil Map Unit Name: 23D 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 ____		
Hydric Soil Present?	Yes ✓ No ____		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ✓ No ____

Remarks:

Covertype is PEM. Area is wetland, all three wetland parameters are present.

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):	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.

Sampling Point: W-F18-60_PEM-1

Tree Stratum (Plot size: 20x10)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		
50% of total cover: 0	20% of total cover: 0		
Sapling/Shrub Stratum (Plot size: 10x5)			
1.			
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. *Carex lurida*	80	Yes	OBL
2. *Eupatorium perfoliatum*	35	Yes	FACW
3. *Parathelypteris noveboracensis*	15	No	FAC
4. *Impatiens capensis*	15	No	FACW
5. *Dichanthelium clandestinum*	3	No	FAC
6. *Phalaris arundinacea*	1	No	FACW
7.			
8.			
9.			
10.			
11.			
	149 = Total Cover		
50% of total cover: 74.5	20% of total cover: 29.8		
Woody Vine Stratum (Plot size: 20x10)			
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:	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	80	x 1 =	80
FACW species	51	x 2 =	102
FAC species	18	x 3 =	54
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	149	(A)	236 (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 vines – 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: W-F18-60_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 1	10YR 4/4	100					Clay Loam	
1 - 14	10YR 4/2	70	7.5YR 3/4	25	C	M/PL	Clay	
1 - 14			10YR 5/6	5	C	M		
14 - 18	10YR 4/1	93	10YR 5/6	5	C	M		
14 - 18			7.5YR 3/4	2	C	M	Clay	
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Danville, Pittsylvania C... Sampling Date: 2018-July-30
Applicant/Owner: NextEra State: VA Sampling Point: W-F18-60_UPL-1
Investigator(s): Beth Clements, JDF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 1 to 10
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5573446 Long: -79.616354 Datum: WGS84
Soil Map Unit Name: 34B 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 ____		
Hydric Soil Present?	Yes ____ No ✓		
Wetland Hydrology Present?	Yes ____ No ✓	Is the Sampled Area within a Wetland?	Yes ____ No ✓

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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):	Wetland Hydrology Present? Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:

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

Sampling Point: W-F18-60_UPL-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Liriodendron tulipifera*	15	Yes	FACU
2. *Salix nigra*	8	Yes	OBL
3.			
4.			
5.			
6.			
7.			
	23	= Total Cover	
50% of total cover: 11.5	20% of total cover:	4.6000000000000005	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Ulmus rubra*	8	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	8	= Total Cover	
50% of total cover: 4	20% of total cover:	1.6	
Herb Stratum (Plot size: 5)			
1. *Verbesina alternifolia*	30	Yes	FAC
2. *Dichanthelium clandestinum*	30	Yes	FAC
3. *Dichanthelium scoparium*	25	Yes	FACW
4. *Carex lurida*	10	No	OBL
5. *Dichanthelium dichotomum*	10	No	FAC
6. *Euthamia graminifolia*	10	No	FAC
7. *Eupatorium capillifolium*	5	No	FACU
8. *Oxalis stricta*	5	No	FACU
9. *Hypericum mutilum*	3	No	FACW
10. *Eupatorium perfoliatum*	2	No	FACW
11. *Rubus argutus*	2	No	FACU
	132	= Total Cover	
50% of total cover: 66	20% of total cover:	26.4	
Woody Vine Stratum (Plot size: 30)			
1. *Smilax rotundifolia*	35	Yes	FAC
2. *Lonicera japonica*	15	Yes	FACU
3.			
4.			
5.			
	50	= Total Cover	
50% of total cover: 25	20% of total cover:	10	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	6	(A)
Total Number of Dominant Species Across All Strata:	8	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	75	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	18	x 1 =	18
FACW species	30	x 2 =	60
FAC species	123	x 3 =	369
FACU species	42	x 4 =	168
UPL species	0	x 5 =	0
Column Totals	213	(A)	615 (B)
Prevalence Index = B/A =	2.9		

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 vines – 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: W-F18-60_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 9	7.5YR 4/4	100					Clay	
9 - 18	10YR 4/4	98	10YR 4/6	2	C	M	Clay	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Cascade, Pittsylvania … Sampling Date: 2018-Aug-06
Applicant/Owner: NextEra State: Virginia Sampling Point: W-C18-87_PFO-2
Investigator(s): Don Lockwood, Simon King, Don Lockwood Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1 to 10
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5513155 Long: -79.6155317 Datum: WGS84
Soil Map Unit Name: Mayodan fine sandy loam NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes _✓_ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Covertype is PFO. Area is wetland, all three wetland parameters are present.

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):	6
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:

A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

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

Sampling Point: W-C18-87_PFO-2

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus phellos*	60	Yes	FAC
2. *Liquidambar styraciflua*	20	Yes	FAC
3. *Acer rubrum*	5	No	FAC
4.			
5.			
6.			
7.			
	85	= Total Cover	
50% of total cover: 42.5	20% of total cover:	17	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Liquidambar styraciflua*	15	Yes	FAC
2.			
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: 5)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	0	= Total Cover	
50% of total cover: 0	20% of total cover:	0	
Woody Vine Stratum (Plot size: 30)			
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:	3	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	100	x 3 =	300
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	100	(A)	300 (B)
Prevalence Index = B/A =	3		

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 vines – 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: W-C18-87_PFO-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 2	10YR 2/1	100					Silt Loam	
2 - 18	10YR 5/2	80	7.5YR 5/6	20	C	M	Sandy Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Hydrology Photos

Vegetation Photos

Soil Photos

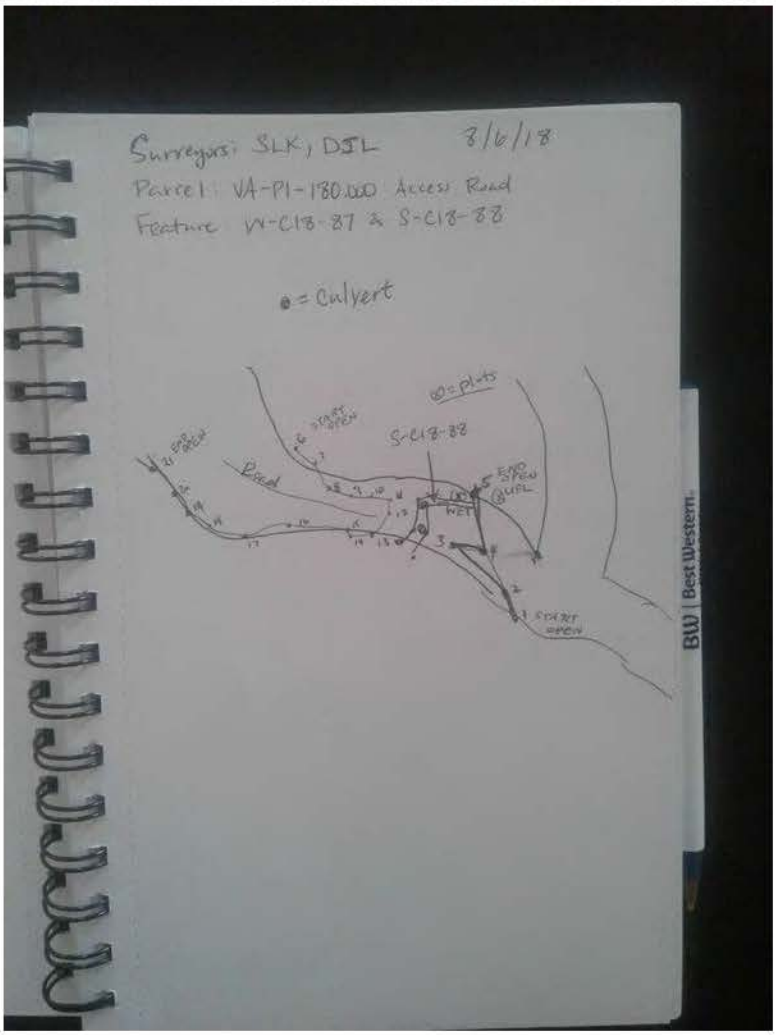
Photo of Sample Plot North

Photo of Sample Plot
East

Photo of Sample Plot
South

Photo of Sample Plot
West

Photo of Sample Plot
Sketch



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Cascade, Pittsylvania … Sampling Date: 2018-Aug-06
Applicant/Owner: NextEra State: Virginia Sampling Point: W-C18-87_UPL-1
Investigator(s): Don Lockwood, Simon King Section, Township, Range:
Landform (hillslope, terrace, etc.): Foot slope Local relief (concave, convex, none): Convex Slope (%): 1 to 10
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5513222 Long: -79.6155115 Datum: WGS84
Soil Map Unit Name: Bolling fine sandy loam NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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):	Wetland Hydrology Present? Yes ____ No ✓
Saturation Present? (includes capillary fringe)	Yes ____ No ✓	Depth (inches):	

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

Remarks:

No positive indication of wetland hydrology was observed.

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

Sampling Point: W-C18-87_UPL-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus virginiana*	40	Yes	UPL
2. *Quercus phellos*	20	Yes	FAC
3. *Quercus alba*	20	Yes	FACU
4. *Acer rubrum*	10	No	FAC
5. *Liquidambar styraciflua*	15	Percent cover cannot be greater than a previous species	FAC
6.			
7.			
	105	= Total Cover	
50% of total cover: 52.5	20% of total cover:		21

Sapling/Shrub Stratum (Plot size: 15)			
1. *Acer rubrum*	15	Yes	FAC
2. *Liquidambar styraciflua*	10	Yes	FAC
3. *Quercus alba*	10	Yes	FACU
4. *Carya ovata*	5	No	FACU
5. *Fagus grandifolia*	5	No	FACU
6.			
7.			
8.			
9.			
	45	= Total Cover	
50% of total cover: 22.5	20% of total cover:		9

Herb Stratum (Plot size: 5)			
1. *Parthenocissus quinquefolia*	10	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	10	= Total Cover	
50% of total cover: 5	20% of total cover:		2

Woody Vine Stratum (Plot size: 30)			
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:	3	(A)
Total Number of Dominant Species Across All Strata:	7	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	42.9	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	70	x 3 =	210
FACU species	50	x 4 =	200
UPL species	40	x 5 =	200
Column Totals	160	(A)	610 (B)
Prevalence Index = B/A =	3.8		

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 vines – 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: W-C18-87_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
-								

[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: None
Depth (inches):

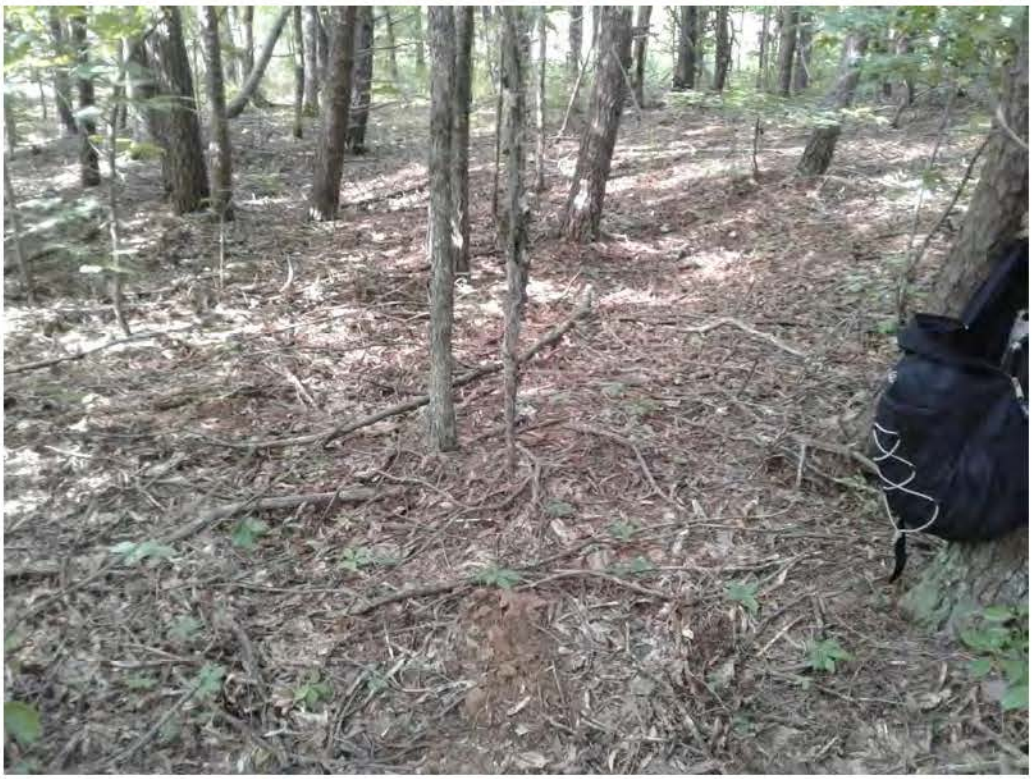
Hydric Soil Present? Yes ☐ No ☑

Remarks:

No positive indication of hydric soils was observed.

Hydrology Photos

Vegetation Photos



Soil Photos

Photo of Sample Plot North

Photo of Sample Plot
East

Photo of Sample Plot
South

Photo of Sample Plot
West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Cascade, Pittsylvania … Sampling Date: 2018-Aug-08
Applicant/Owner: NextEra State: Virginia Sampling Point: W-C18-91_PEM-1
Investigator(s): Simon King, Simon King, Don Lockwood Section, Township, Range:
Landform (hillslope, terrace, etc.): Back slope Local relief (concave, convex, none): Concave Slope (%): 1 to 3
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5444596 Long: -79.6301129 Datum: WGS84
Soil Map Unit Name: Mayodan fine sandy loam NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes _✓_ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes _✓_ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Covertype is PEM. Area is wetland, all three wetland parameters are present.

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):	6
Water Table Present?	Yes _✓_ No ____	Depth (inches):	0
Saturation Present? (includes capillary fringe)	Yes _✓_ No ____	Depth (inches):	0

Wetland Hydrology Present? Yes _✓_ No ____

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

Remarks:

The criterion for wetland hydrology is met.

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

Sampling Point: W-C18-91_PEM-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
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.			
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. *Eupatorium perfoliatum*	20	Yes	FACW
2. *Juncus effusus*	20	Yes	FACW
3. *Carex lurida*	15	Yes	OBL
4. *Sagittaria latifolia*	15	Yes	OBL
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)			
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:	4	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	30	x 1 =	30
FACW species	40	x 2 =	80
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	70	(A)	110 (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 vines – 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: W-C18-91_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 10	10YR 5/2	80	7.5YR 4/6	20	C	M	Clay Loam	
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Hydrology Photos

Vegetation Photos

Soil Photos

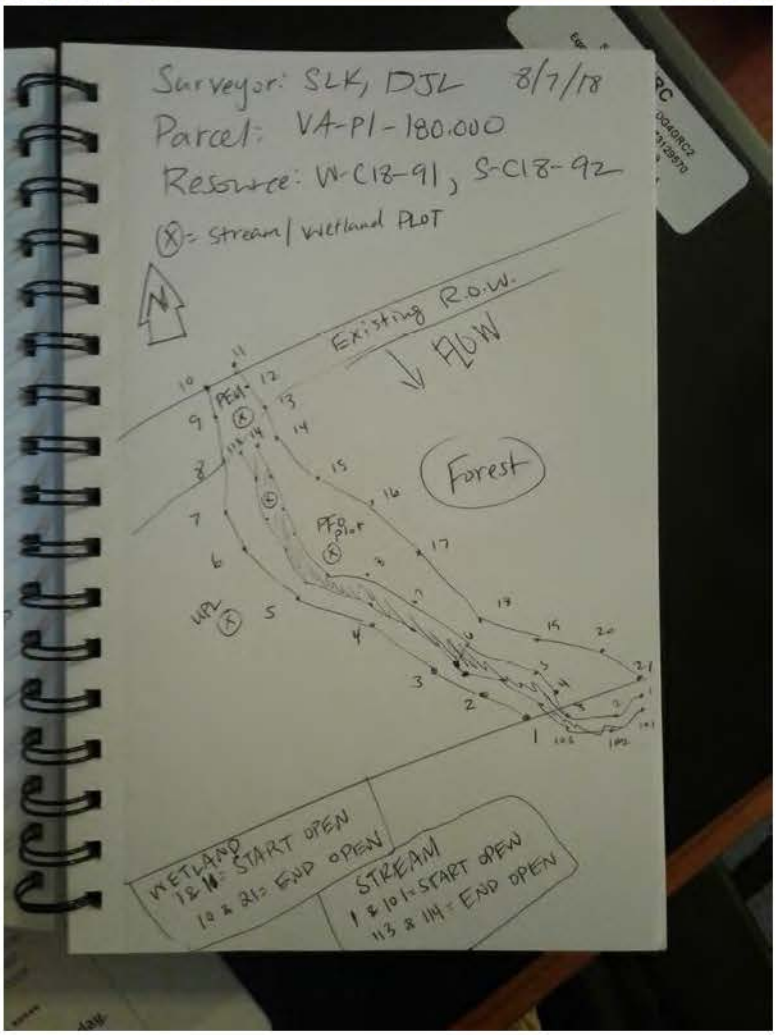
Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot
West

Photo of Sample Plot
Sketch



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Cascade, Pittsylvania … Sampling Date: 2018-Aug-08
Applicant/Owner: NextEra State: Virginia Sampling Point: W-C18-91_PFO-1
Investigator(s): Simon King, Simon King, Don Lockwood Section, Township, Range:
Landform (hillslope, terrace, etc.): Back slope Local relief (concave, convex, none): Concave Slope (%): 1 to 3
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5441985 Long: -79.6296891 Datum: WGS84
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 ____		
Hydric Soil Present?	Yes ✓ No ____		
Wetland Hydrology Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland?	Yes ✓ No ____

Remarks:

Covertype is PFO. Area is wetland, all three wetland parameters are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ✓ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Microtopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ✓ No ____	Depth (inches):	0	
Water Table Present?	Yes ✓ No ____	Depth (inches):	4	Wetland Hydrology Present? Yes ✓ No ____
Saturation Present? (includes capillary fringe)	Yes ✓ No ____	Depth (inches):	0	

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

Remarks:

The criterion for wetland hydrology is met.

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

Sampling Point: W-C18-91_PFO-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Liquidambar styraciflua*	30	Yes	FAC
2. *Acer rubrum*	20	Yes	FAC
3. *Quercus phellos*	15	No	FAC
4. *Fagus grandifolia*	10	No	FACU
5. *Ulmus alata*	10	No	FACU
6.			
7.			
	85	= Total Cover	
50% of total cover: 42.5	20% of total cover:	17	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Liquidambar styraciflua*	40	Yes	FAC
2. *Fagus grandifolia*	10	No	FACU
3. *Quercus phellos*	5	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
	55	= Total Cover	
50% of total cover: 27.5	20% of total cover:	11	
Herb Stratum (Plot size: 5)			
1. *Microstegium vimineum*	70	Yes	FAC
2. *Juncus effusus*	10	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	80	= Total Cover	
50% of total cover: 40	20% of total cover:	16	
Woody Vine Stratum (Plot size: 30)			
1. *Smilax rotundifolia*	5	Yes	FAC
2.			
3.			
4.			
5.			
	5	= Total Cover	
50% of total cover: 2.5	20% of total cover:	1	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	5	(A)
Total Number of Dominant Species Across All Strata:	5	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	185	x 3 =	555
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column Totals	225	(A)	695 (B)
Prevalence Index = B/A =	3.1		

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 vines – 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: W-C18-91_PFO-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 18	10YR 5/2	90	10YR 3/6	10	C	M	Sandy Clay Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

The criterion for hydric soil is met.

Hydrology **Ph**otos

Vegetation Pho**tos**

Soil Photos

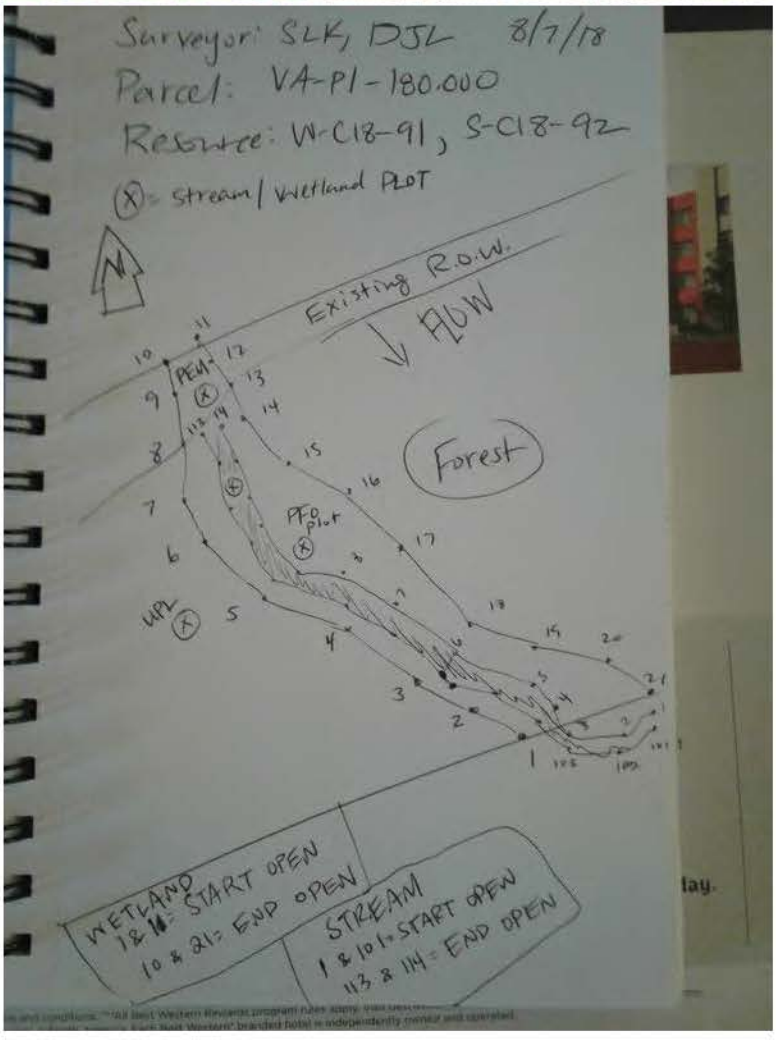
Photo of Sample Plot North

Photo of Sample Plot
East

Photo of Sample Plot
South

Photo of Sample Plot
West

Photo of Sample Plot
Sketch



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Cascade, Pittsylvania … Sampling Date: 2018-Aug-07
Applicant/Owner: NextEra State: Virginia Sampling Point: W-C18-91_UPL-1
Investigator(s): Don Lockwood, Simon King, Don Lockwood Section, Township, Range:
Landform (hillslope, terrace, etc.): Foot slope Local relief (concave, convex, none): Convex Slope (%): 1 to 10
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5440853 Long: -79.6298686 Datum: WGS84
Soil Map Unit Name: Mayodan fine sandy loam NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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:

No positive indication of wetland hydrology was observed.

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

Sampling Point: W-C18-91_UPL-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fagus grandifolia*	60	Yes	FACU
2. *Quercus alba*	20	Yes	FACU
3. *Liquidambar styraciflua*	10	No	FAC
4.			
5.			
6.			
7.			
	90	= Total Cover	
50% of total cover: 45	20% of total cover:	18	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Fagus grandifolia*	10	Yes	FACU
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: 5)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	0	= Total Cover	
50% of total cover: 0	20% of total cover:	0	
Woody Vine Stratum (Plot size: 30)			
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:	0	(A)
Total Number of Dominant Species Across All Strata:	3	(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	10	x 3 =	30
FACU species	90	x 4 =	360
UPL species	0	x 5 =	0
Column Totals	100	(A)	390 (B)
Prevalence Index = B/A =	3.9		

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 vines – 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: W-C18-91_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 2	10YR 3/3	100					Loam	
2 - 8	10YR 4/6	100					Silt Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Vegetation Photos

Soil Photos

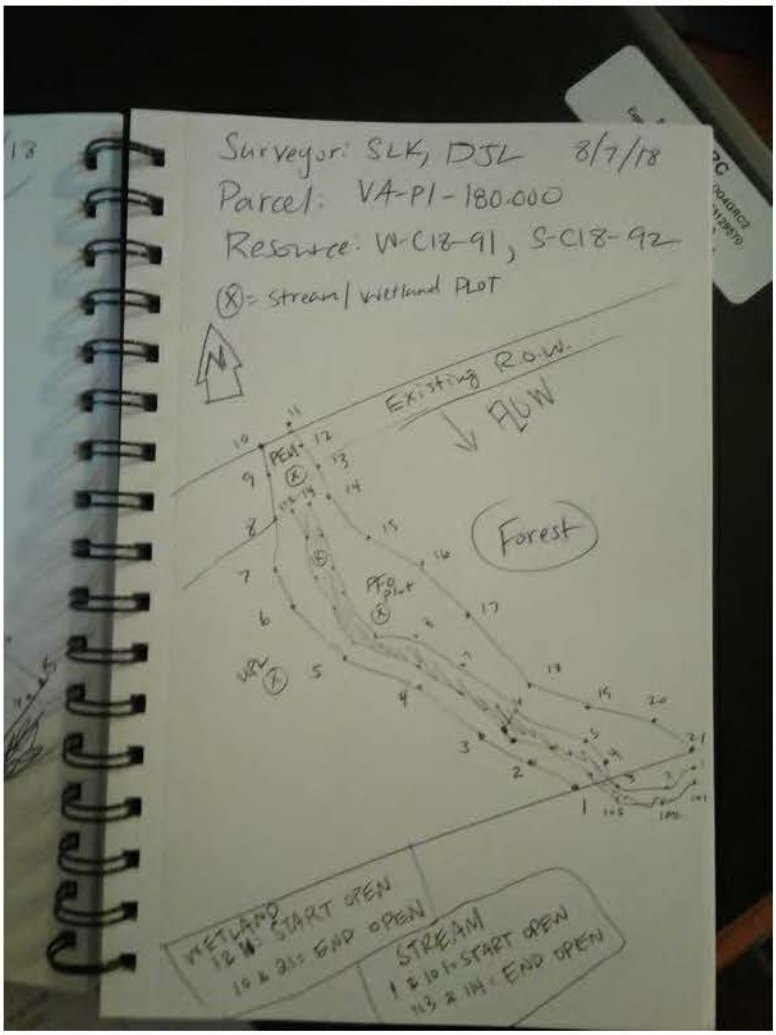
Photo of Sample Plot North

Photo of Sample Plot
East

Photo of Sample Plot
South

Photo of Sample Plot West

Photo of Sample Plot Sketch



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Cascade, Pittsylvania … Sampling Date: 2018-Aug-09
Applicant/Owner: NextEra State: Virginia Sampling Point: W-C18-96_PEM-1
Investigator(s): Don Lockwood, Simon King, Don Lockwood Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 1 to 10
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5418497 Long: -79.6326315 Datum: WGS84
Soil Map Unit Name: Mayodan fine sandy loam NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Covertype is PEM. Area is wetland, all three wetland parameters are present.

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):	3	
Water Table Present?	Yes ✓ No ____	Depth (inches):	0	Wetland Hydrology Present? Yes ✓ No ____
Saturation Present? (includes capillary fringe)	Yes ✓ No ____	Depth (inches):	0	

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

Remarks:

A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

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

Sampling Point: W-C18-96_PEM-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	45	Yes	FAC
2. *Fraxinus pennsylvanica*	10	No	FACW
3.			
4.			
5.			
6.			
7.			
	55	= Total Cover	
50% of total cover: 27.5	20% of total cover:	11	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Acer rubrum*	20	Yes	FAC
2. *Liquidambar styraciflua*	20	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	40	= Total Cover	
50% of total cover: 20	20% of total cover:	8	
Herb Stratum (Plot size: 5)			
1. *Carex lupulina*	40	Yes	OBL
2. *Microstegium vimineum*	15	Yes	FAC
3. *Boehmeria cylindrica*	5	No	FACW
4.			
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)			
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:	5	(A)
Total Number of Dominant Species Across All Strata:	5	(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	15	x 2 =	30
FAC species	100	x 3 =	300
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	155	(A)	370 (B)
Prevalence Index = B/A =	2.4		

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 vines – 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: W-C18-96_PEM-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 10	10YR 4/1	90	10YR 4/6	10	C	M	Sandy Clay Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) (MLRA **147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLR**A 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: None

Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Hydrology Photos

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot
East

Photo of Sample Plot
South

Photo of Sample Plot
West

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Cascade, Pittsylvania … Sampling Date: 2018-Aug-09
Applicant/Owner: NextEra State: Virginia Sampling Point: W-C18-96_PFO-1
Investigator(s): Simon King, Simon King, Don Lockwood Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 1 to 10
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5418377 Long: -79.6324803 Datum: WGS84
Soil Map Unit Name: Mayodan fine sandy loam NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Covertype is PFO. Area is wetland, all three wetland parameters are present.

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):	1	
Water Table Present?	Yes ✓ No ____	Depth (inches):	0	Wetland Hydrology Present? Yes ✓ No ____
Saturation Present? (includes capillary fringe)	Yes ✓ No ____	Depth (inches):	0	

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

Remarks:

The criterion for wetland hydrology is met. A positive indication of wetland hydrology was observed (at least one primary indicator). A positive indication of wetland hydrology was observed (at least two secondary indicators).

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

Sampling Point: W-C18-96_PFO-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	20	Yes	FAC
2. *Pinus taeda*	20	Yes	FAC
3. *Quercus phellos*	20	Yes	FAC
4. *Liquidambar styraciflua*	20	Yes	FAC
5.			
6.			
7.			
	80	= Total Cover	
50% of total cover: 40	20% of total cover:	16	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Acer rubrum*	15	Yes	FAC
2. *Quercus phellos*	15	Yes	FAC
3. *Nyssa sylvatica*	15	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
	45	= Total Cover	
50% of total cover: 22.5	20% of total cover:	9	
Herb Stratum (Plot size: 5)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	0	= Total Cover	
50% of total cover: 0	20% of total cover:	0	
Woody Vine Stratum (Plot size: 30)			
1. *Smilax rotundifolia*	5	Yes	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:	8	(A)
Total Number of Dominant Species Across All Strata:	8	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply By:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	130	x 3 =	390
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals	130	(A)	390 (B)
Prevalence Index = B/A =	3		

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 vines – 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.)

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

SOIL

Sampling Point: W-C18-96_PFO-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 2	10YR 3/2	100					Silt Loam	
2 - 18	10YR 5/2	90	7.5YR 4/6	10	C	M	Silty Clay Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None

Depth (inches):

Hydric Soil Present? Yes ☑ No ☐

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Hydrology Photos

Vegetation Photos

Soil Photos

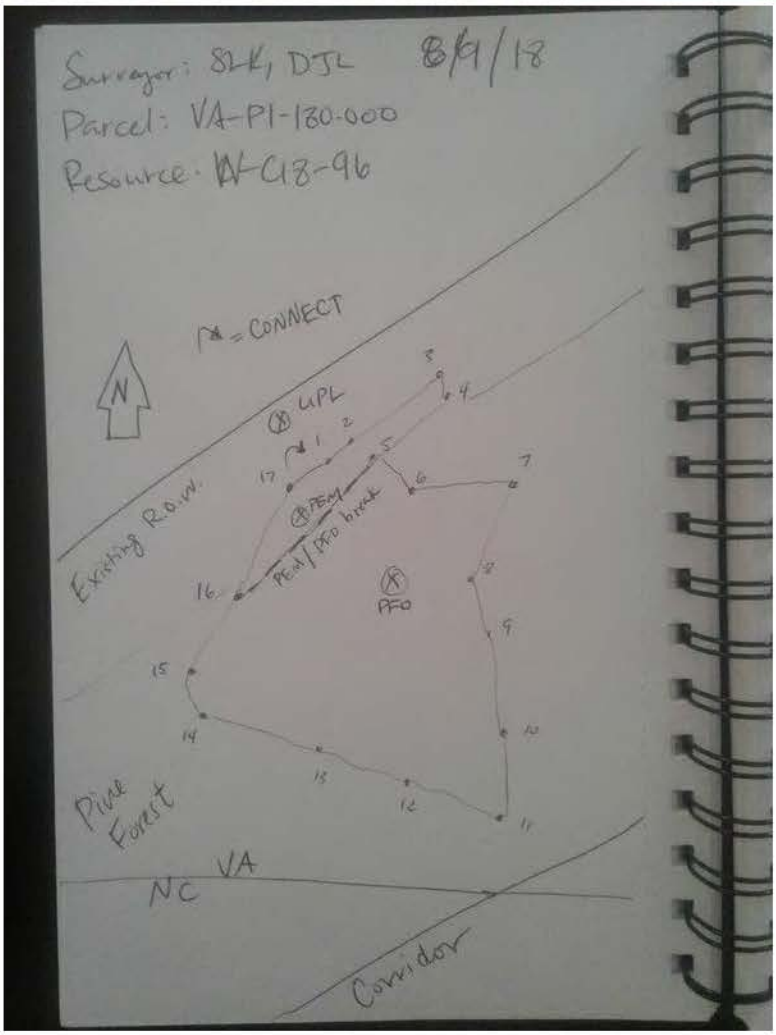
Photo of Sample Plot North

Photo of Sample Plot
East

Photo of Sample Plot
South

Photo of Sample Plot
West

Photo of Sample Plot
Sketch



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP Southgate City/County: Cascade, Pittsylvania … Sampling Date: 2018-Aug-09
Applicant/Owner: NextEra State: Virginia Sampling Point: W-C18-96_UPL-1
Investigator(s): Don Lockwood, Simon King, Don Lockwood Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 1 to 10
Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.541799 Long: -79.6327328 Datum: WGS84
Soil Map Unit Name: Mayodan fine sandy loam NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

Covertype is UPL. Area is upland, not all three wetland parameters are present.

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):	12	Wetland Hydrology Present? Yes ✓ No ____
Saturation Present? (includes capillary fringe)	Yes ✓ No ____	Depth (inches):	10	

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

Remarks:

A positive indication of wetland hydrology was observed (primary and secondary indicators were present). recent heavy rain.

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

Sampling Point: W-C18-96_UPL-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
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.			
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. *Melilotus indicus*	60	Yes	FACU
2. *Panicum capillare*	20	No	FAC
3. *Prunella vulgaris*	20	No	FACU
4. *Solanum carolinense*	10	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	110 = Total Cover		
50% of total cover: 55	20% of total cover: 22		
Woody Vine Stratum (Plot size: 30)			
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:	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	20	x 3 =	60
FACU species	90	x 4 =	360
UPL species	0	x 5 =	0
Column Totals	110	(A)	420 (B)
Prevalence Index = B/A =	3.8		

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 vines – 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: W-C18-96_UPL-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 2	10YR 4/3	100					Sandy Clay Loam	
2 - 12	10YR 4/3	90	7.5YR 5/6	10	C	M	Sandy Clay Loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: None
Depth (inches):

Hydric Soil Present? Yes ☐ No ☑

Remarks:

No positive indication of hydric soils was observed.

Hydrology Photos

Vegetation Photos

Soil Photos

Photo of Sample Plot North

Photo of Sample Plot East

Photo of Sample Plot South

Photo of Sample Plot
West