

**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: MVP Southgate City/County: Eden, Rockingham Sampling Date: 2018-May-15  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A18-18\_PEM-1  
 Investigator(s): Laura Giese, Joe Roy, Simon King Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 0 to 1  
 Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.499619 Long: -79.6744944 Datum: WGS84  
 Soil Map Unit Name: Dan River loam, 0 to 2 percent slopes, frequently flooded NWI classification: None  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:  Covertype is PEM. Area is wetland, all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	
(includes capillary fringe)		
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-A18-18 PEM-1

	Absolute % Cover	Dominant Species?	Indicator Status																																	
<b>Tree Stratum (Plot size: 30')</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 20%; text-align: center;">Total % Cover of:</th> <th style="width: 20%;"></th> <th style="width: 30%; text-align: center;">Multiply By:</th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;"><u>30</u></td> <td></td> <td style="text-align: center;">x 1 = <u>30</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>35</u></td> <td></td> <td style="text-align: center;">x 2 = <u>70</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 3 = <u>0</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 4 = <u>0</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;"><u>65</u></td> <td style="text-align: center;">(A)</td> <td style="text-align: center;"><u>100</u> (B)</td> </tr> <tr> <td colspan="4" style="text-align: center;">Prevalence Index = B/A = <u>1.5</u></td> </tr> </tbody> </table>		Total % Cover of:		Multiply By:	OBL species	<u>30</u>		x 1 = <u>30</u>	FACW species	<u>35</u>		x 2 = <u>70</u>	FAC species	<u>0</u>		x 3 = <u>0</u>	FACU species	<u>0</u>		x 4 = <u>0</u>	UPL species	<u>0</u>		x 5 = <u>0</u>	Column Totals	<u>65</u>	(A)	<u>100</u> (B)	Prevalence Index = B/A = <u>1.5</u>			
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Column Totals	<u>65</u>	(A)	<u>100</u> (B)																																	
Prevalence Index = B/A = <u>1.5</u>																																				
1. _____	_____	_____	_____																																	
2. _____	_____	_____	_____																																	
3. _____	_____	_____	_____																																	
4. _____	_____	_____	_____																																	
5. _____	_____	_____	_____																																	
6. _____	_____	_____	_____																																	
7. _____	_____	_____	_____																																	
<u>0</u> = Total Cover																																				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																				
<b>Sapling/Shrub Stratum (Plot size: 15')</b>																																				
1. _____	_____	_____	_____																																	
2. _____	_____	_____	_____																																	
3. _____	_____	_____	_____																																	
4. _____	_____	_____	_____																																	
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7. _____	_____	_____	_____																																	
8. _____	_____	_____	_____																																	
9. _____	_____	_____	_____																																	
<u>0</u> = Total Cover																																				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																				
<b>Herb Stratum (Plot size: 5')</b>																																				
1. <i>Juncus effusus</i>	25	Yes	FACW																																	
2. <i>Alisma subcordatum</i>	10	Yes	OBL																																	
3. <i>Carex lurida</i>	10	Yes	OBL																																	
4. <i>Juncus acuminatus</i>	10	Yes	OBL																																	
5. <i>Carex scoparia</i>	10	Yes	FACW																																	
6. _____	_____	_____	_____																																	
7. _____	_____	_____	_____																																	
8. _____	_____	_____	_____																																	
9. _____	_____	_____	_____																																	
10. _____	_____	_____	_____																																	
11. _____	_____	_____	_____																																	
<u>65</u> = Total Cover																																				
50% of total cover: <u>32.5</u> 20% of total cover: <u>13</u>																																				
<b>Woody Vine Stratum (Plot size: 30')</b>																																				
1. _____	_____	_____	_____																																	
2. _____	_____	_____	_____																																	
3. _____	_____	_____	_____																																	
4. _____	_____	_____	_____																																	
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50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																				
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>																																				
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).																																				



Photo of Sample Plot  
North



extension facing n

Photo of Sample Plot  
East



extension facing west near flag w-  
b19-7

Photo of Sample Plot  
South



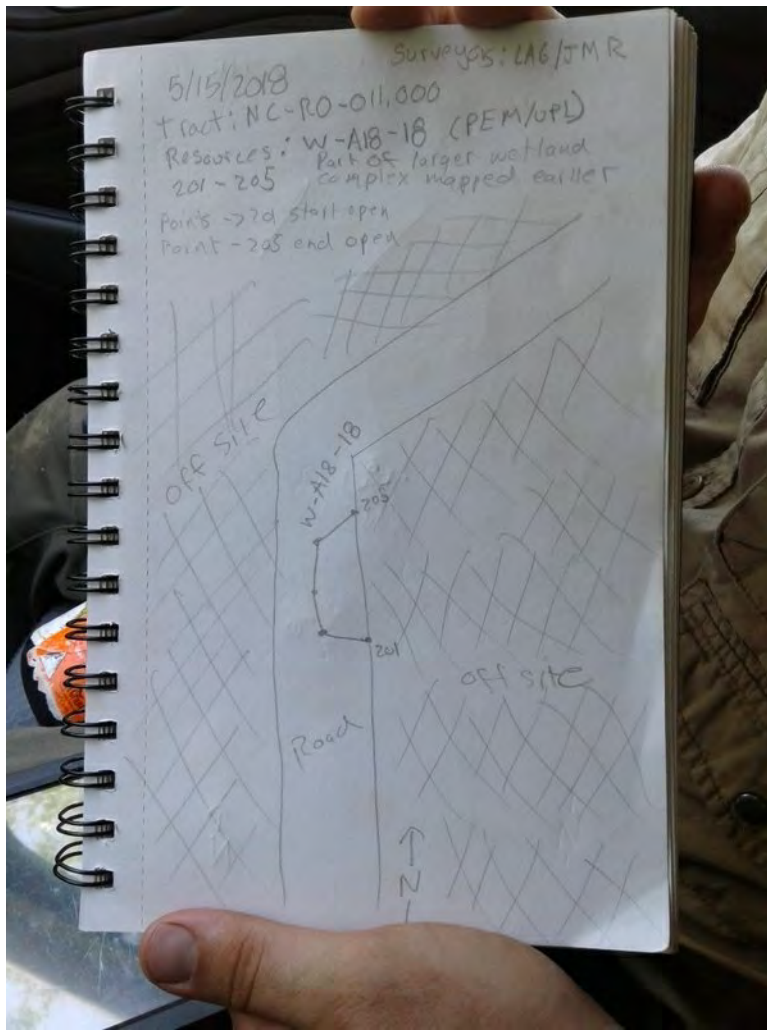
extension facing s

Photo of Sample Plot West

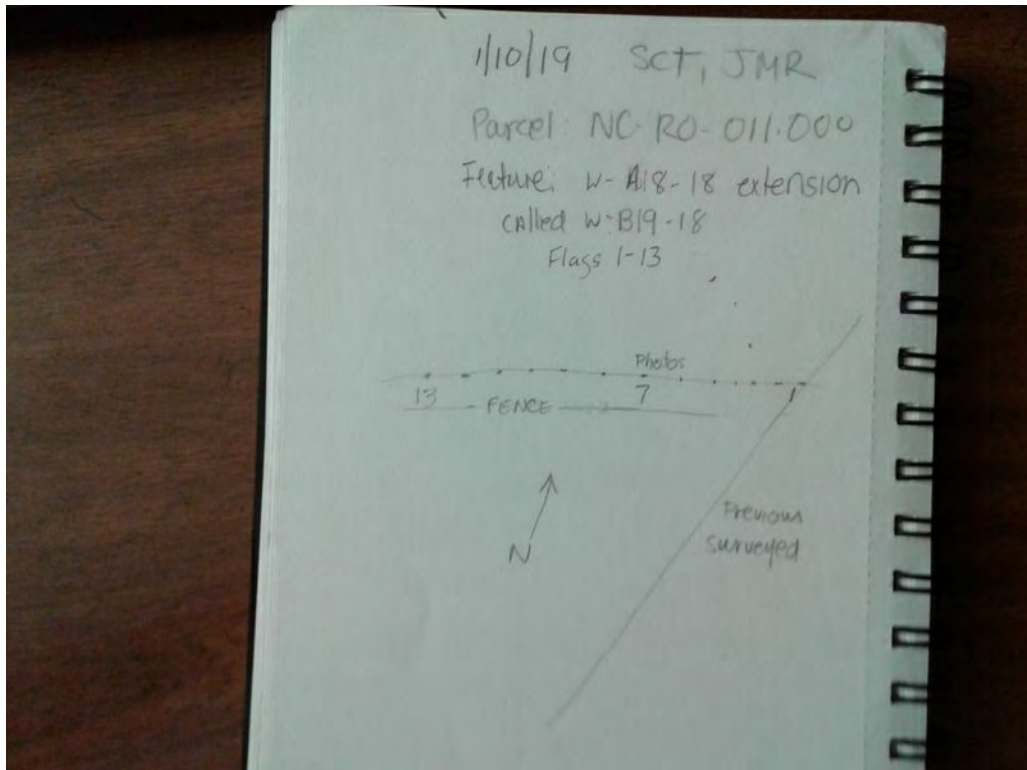
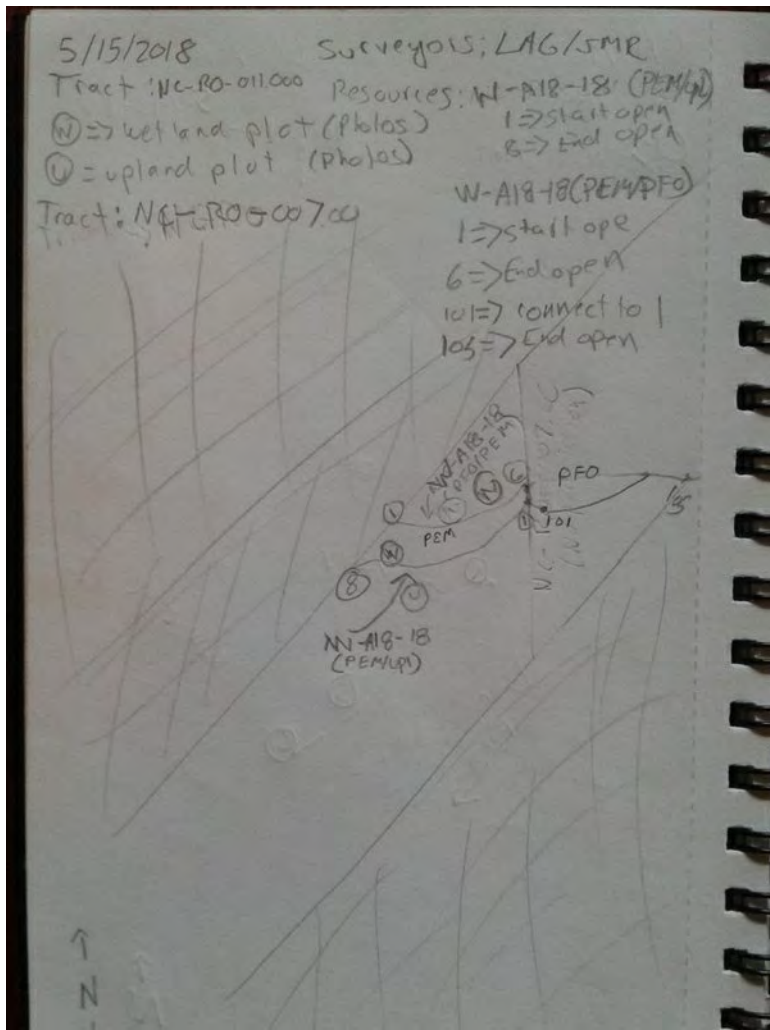


extension near flag w-b19-18-1

Photo of Sample Plot Sketch







**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: MVP Southgate City/County: Eden, Rockingham Sampling Date: 2018-May-17  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A18-26\_PEM-1  
 Investigator(s): Laura Giese, Joe Roy, Doreen Donovan Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Concave Slope (%): 0 to 1  
 Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5188368 Long: -79.6540585 Datum: WGS84  
 Soil Map Unit Name: Banister loam, 0 to 4 percent slopes, rarely flooded NWI classification: None  
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 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.)

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Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:  Covertype is PEM. Area is wetland, all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:  The criterion for wetland hydrology is met. surface water due to heavy rains previous day .	

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

Sampling Point: W-A18-26 PEM-1

<u>Tree Stratum</u> (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: _____	1 (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____	2 (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____	50 (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>	
5. _____	_____	_____	_____	<u>Total % Cover of:</u>	<u>Multiply By:</u>
6. _____	_____	_____	_____	OBL species _____	x 1 = _____
7. _____	_____	_____	_____	FACW species _____	x 2 = _____
_____ = Total Cover				FAC species _____	x 3 = _____
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				FACU species _____	x 4 = _____
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15'</u> )				UPL species _____	x 5 = _____
1. _____	_____	_____	_____	Column Totals _____	(A) 185 (B)
2. _____	_____	_____	_____	Prevalence Index = B/A = <u>2.1</u>	
3. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b>	
4. _____	_____	_____	_____	____ 1 - Rapid Test for Hydrophytic Vegetation	
5. _____	_____	_____	_____	____ 2 - Dominance Test is > 50%	
6. _____	_____	_____	_____	<input checked="" type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>	
7. _____	_____	_____	_____	____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
8. _____	_____	_____	_____	____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
9. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
_____ = Total Cover				<b>Definitions of Four Vegetation Strata:</b>	
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
<b>Herb Stratum</b> (Plot size: <u>5'</u> )				<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
1. <u>Ranunculus abortivus</u>	65	Yes	FACW	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
2. <u>Poaceae</u>	35	Yes	NI	<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
3. <u>Juncus effusus</u>	10	No	FACW	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
4. <u>Symphotrichum lanceolatum</u>	10	No	FACW		
5. <u>Campsis radicans</u>	5	No	FAC		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
_____ = Total Cover					
50% of total cover: <u>62.5</u> 20% of total cover: <u>25</u>					
<b>Woody Vine Stratum</b> (Plot size: <u>30'</u> )					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
_____ = Total Cover					
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>					
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>					
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).					

SOIL

Sampling Point: W-A18-26 PEM-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>		
0 - 6	10YR 4/2	90	10YR 4/6	10	C	M	Silt Loam
6 - 17	2.5Y 5/3	70	7.5YR 4/6	15	C	M	
6 - 17			2.5Y 6/1	15	D	M	
17 - 21	2.5Y 6/3	90	7.5YR 5/8	10	C	M	
<sup>1</sup> Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup> Location: PL = Pore Lining, M = Matrix.							
<b>Hydric Soil Indicators:</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) (LRR N) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136) <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)	
<b>Restrictive Layer (if observed):</b> Type: <u>None</u> Depth (inches): _____					<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b>          							

Photo of Sample Plot  
North



Photo of Sample Plot  
East



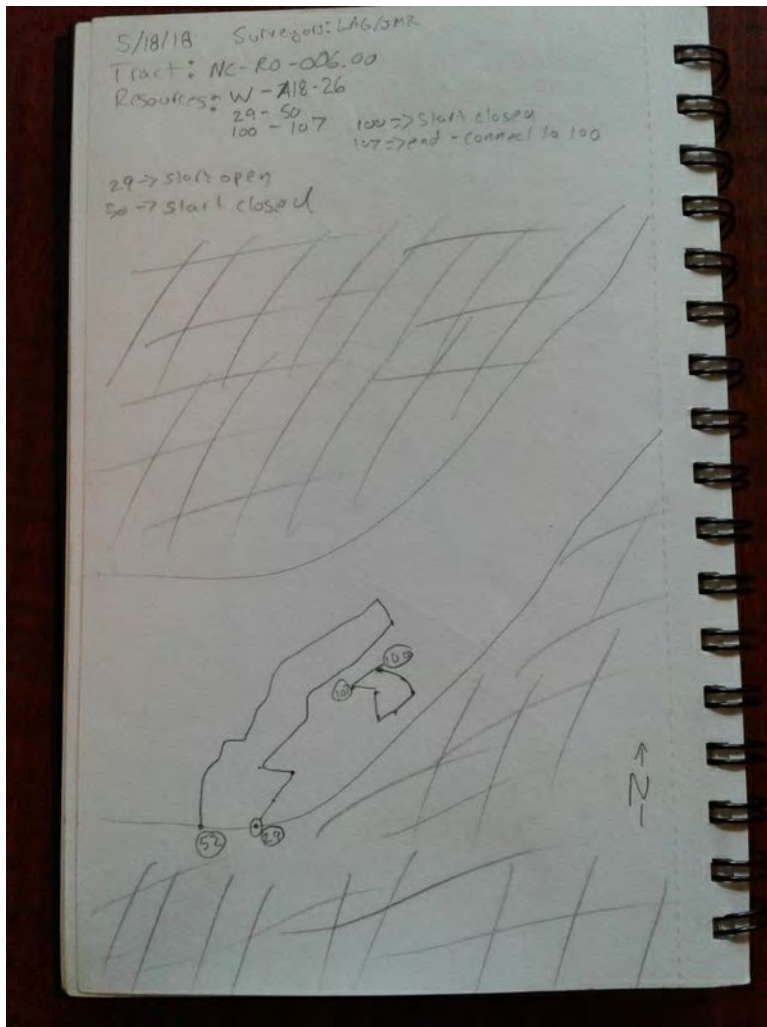
Photo of Sample Plot South



Photo of Sample Plot West



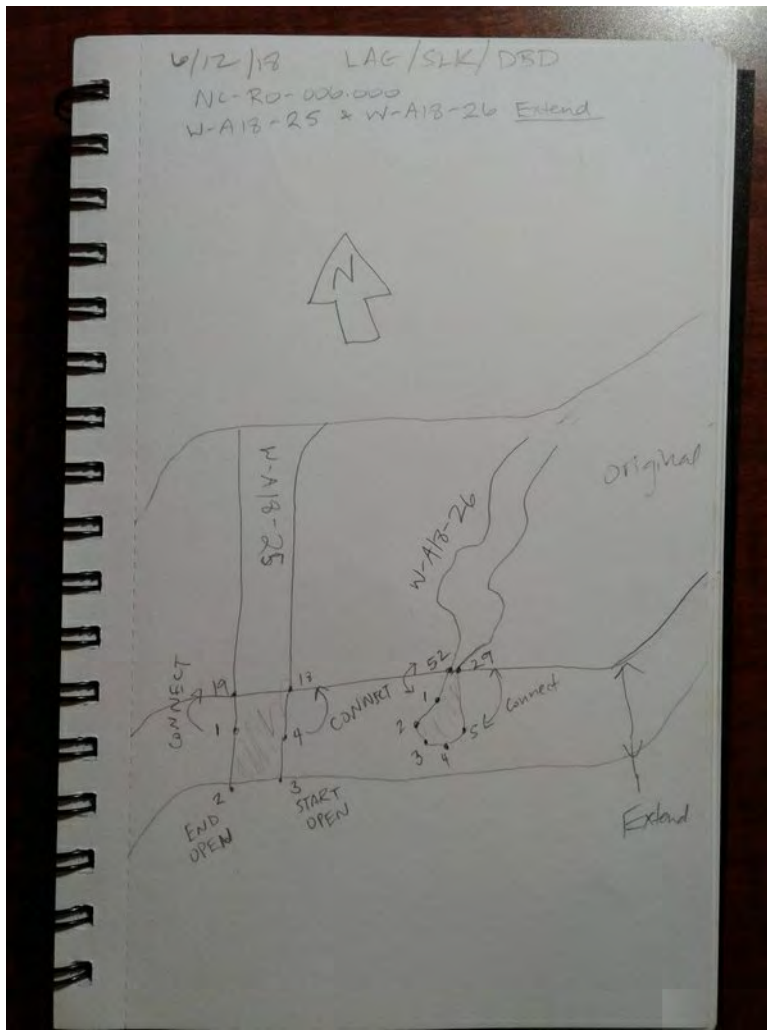
Photo of Sample Plot Sketch











A19 ext, north



A1o ext, east



A19 ext, south

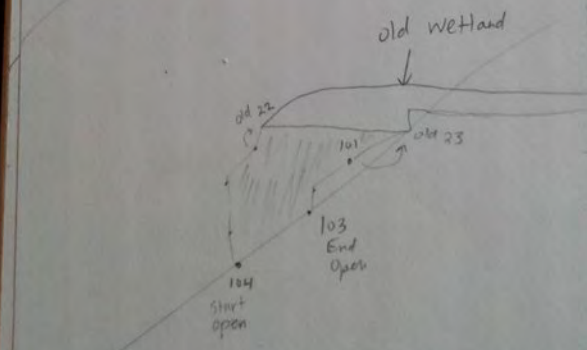


s-a19, ect, west

1/15/19 SLK, LAG

NC-RO-006.000

W-A18-26 A19 Ext.



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 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A18-39\_PEM-1  
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**HYDROLOGY**

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<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)		
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Stunted or Stressed Plants (D1)		
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<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Microtopographic Relief (D4)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Iron Deposits (B5)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)					
<input type="checkbox"/> Water-Stained Leaves (B9)					
<input type="checkbox"/> Aquatic Fauna (B13)					
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)			Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  					
Remarks:  The criterion for wetland hydrology is met. 4 inches of surface water after recent heavy rains.					

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

Sampling Point: W-A18-39 PEM-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status																																																	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 20%; text-align: center;"><u>Total % Cover of:</u></th> <th style="width: 10%;"></th> <th style="width: 10%; text-align: center;"><u>Multiply By:</u></th> <th style="width: 10%;"></th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;"><u>20</u></td> <td></td> <td>x 1 =</td> <td style="text-align: center;"><u>20</u></td> <td></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>15</u></td> <td></td> <td>x 2 =</td> <td style="text-align: center;"><u>30</u></td> <td></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td>x 3 =</td> <td style="text-align: center;"><u>0</u></td> <td></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td>x 4 =</td> <td style="text-align: center;"><u>0</u></td> <td></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td>x 5 =</td> <td style="text-align: center;"><u>0</u></td> <td></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;"><u>35</u></td> <td></td> <td>(A)</td> <td style="text-align: center;"><u>50</u></td> <td>(B)</td> </tr> <tr> <td colspan="4" style="text-align: right;">Prevalence Index = B/A =</td> <td style="text-align: center;"><u>1.4</u></td> <td></td> </tr> </tbody> </table>		<u>Total % Cover of:</u>		<u>Multiply By:</u>			OBL species	<u>20</u>		x 1 =	<u>20</u>		FACW species	<u>15</u>		x 2 =	<u>30</u>		FAC species	<u>0</u>		x 3 =	<u>0</u>		FACU species	<u>0</u>		x 4 =	<u>0</u>		UPL species	<u>0</u>		x 5 =	<u>0</u>		Column Totals	<u>35</u>		(A)	<u>50</u>	(B)	Prevalence Index = B/A =				<u>1.4</u>	
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<b>Herb Stratum</b> (Plot size: <u>5'</u> )																																																				
1. <u>Eleocharis obtusa</u>	<u>20</u>	Yes	OBL	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤ 3.0' <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic  <b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																																																
2. <u>Ranunculus abortivus</u>	<u>10</u>	Yes	FACW																																																	
3. <u>Diodia virginiana</u>	<u>5</u>	No	FACW																																																	
4. _____	_____	_____	_____																																																	
5. _____	_____	_____	_____																																																	
6. _____	_____	_____	_____																																																	
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11. _____	_____	_____	_____																																																	
<u>35</u> = Total Cover																																																				
50% of total cover: <u>17.5</u>		20% of total cover: <u>7</u>																																																		
<b>Woody Vine Stratum</b> (Plot size: <u>30'</u> )																																																				
1. _____	_____	_____	_____																																																	
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<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>																																																				
No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC– or drier).																																																				

SOIL

Sampling Point: W-A18-39 PEM-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>		
0 - 5	10YR 4/2	95	10YR 5/8	5	C	M	Silt Loam
5 - 11	2.5Y 5/3	80	10YR 5/8	10			
5 - 11			2.5Y 5/1	10	D	M	
11 - 16	2.5Y 5/3	65	7.5YR 5/8	30	C	M	Clay
11 - 16			5YR 5/8	5	C	M	

<sup>1</sup>Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup>Location: PL = Pore Lining, M = Matrix.

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

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

Restrictive Layer (if observed):	Hydric Soil Present?
Type: <u>None</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Depth (inches): _____	

Remarks:

A positive indication of hydric soil was observed.



Photo of Sample Plot  
North



Photo of Sample Plot  
East



Photo of Sample Plot  
South



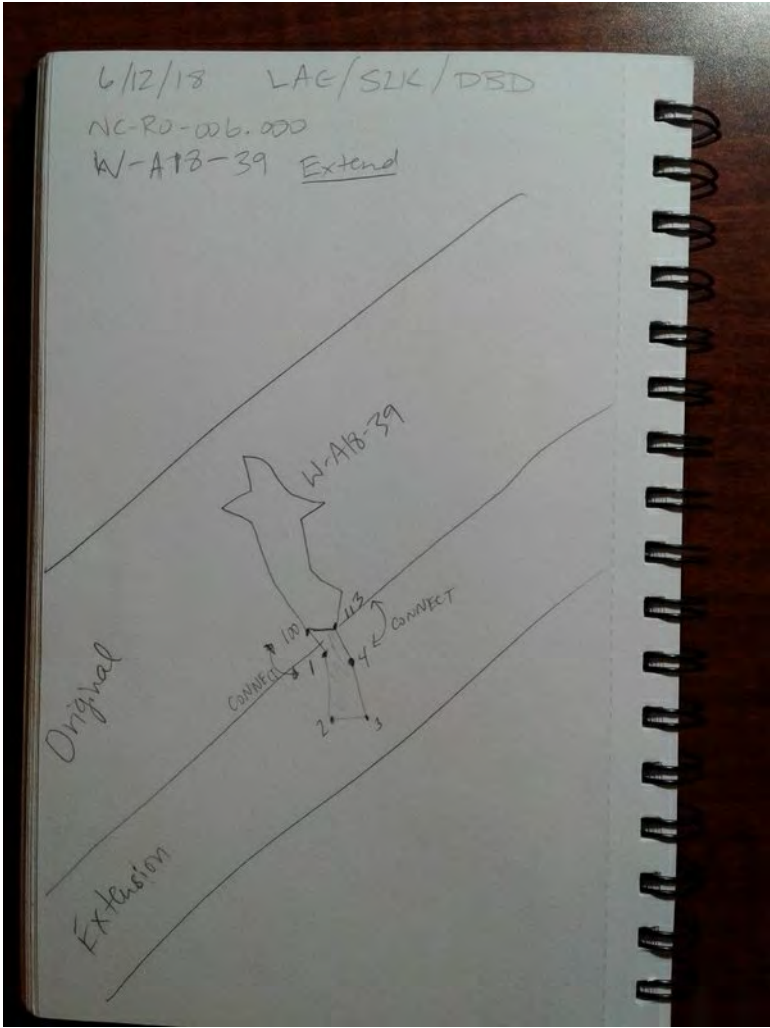
Photo of Sample Plot  
West



Photo of Sample Plot  
Sketch









A19 ext, north



A29 ext, east



A19 ext, south



A19 ext, west

1/15/19 SLK, ZAG

NC-Ro-006000

W- A17-39 A19 Ext.

\* There is no 100 series

↑ N





**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: MVP Southgate City/County: Eden, Rockingham Sampling Date: 2018-May-22  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A18-44\_PEM-1  
 Investigator(s): Laura Giese, Joe Roy, Simon King 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: 36.528531 Long: -79.644317 Datum: WGS84  
 Soil Map Unit Name: Banister loam, 0 to 4 percent slopes, rarely flooded NWI classification: None  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:  Covertype is PEM. Area is wetland, all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
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<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>16</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>4</u>	
(includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		
The criterion for wetland hydrology is met. Soil is episaturated. Water at 4" in borehole from surface .		

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

Sampling Point: W-A18-44 PEM-1

	Absolute % Cover	Dominant Species?	Indicator Status																																																	
<b>Tree Stratum (Plot size: 30)</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 20%; text-align: center;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 10%; text-align: center;">Multiply By:</th> <th style="width: 10%;"></th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;"><u>35</u></td> <td></td> <td style="text-align: center;">x 1 =</td> <td style="text-align: center;"><u>35</u></td> <td></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>15</u></td> <td></td> <td style="text-align: center;">x 2 =</td> <td style="text-align: center;"><u>30</u></td> <td></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>25</u></td> <td></td> <td style="text-align: center;">x 3 =</td> <td style="text-align: center;"><u>75</u></td> <td></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>10</u></td> <td></td> <td style="text-align: center;">x 4 =</td> <td style="text-align: center;"><u>40</u></td> <td></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 5 =</td> <td style="text-align: center;"><u>0</u></td> <td></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;"><u>85</u></td> <td style="text-align: center;">(A)</td> <td></td> <td style="text-align: center;"><u>180</u></td> <td style="text-align: center;">(B)</td> </tr> <tr> <td colspan="6" style="text-align: center;">Prevalence Index = B/A = <u>2.1</u></td> </tr> </tbody> </table>		Total % Cover of:		Multiply By:			OBL species	<u>35</u>		x 1 =	<u>35</u>		FACW species	<u>15</u>		x 2 =	<u>30</u>		FAC species	<u>25</u>		x 3 =	<u>75</u>		FACU species	<u>10</u>		x 4 =	<u>40</u>		UPL species	<u>0</u>		x 5 =	<u>0</u>		Column Totals	<u>85</u>	(A)		<u>180</u>	(B)	Prevalence Index = B/A = <u>2.1</u>					
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1. <i>Juncus effusus</i>	10	Yes	FACW																																																	
2. <i>Galium palustre</i>	10	Yes	OBL																																																	
3. <i>Hibiscus moscheutos</i>	10	Yes	OBL																																																	
4. <i>Dichanthelium dichotomum</i>	10	Yes	FAC																																																	
5. <i>Arthraxon hispidus</i>	10	Yes	FAC																																																	
6. <i>Carex lurida</i>	10	Yes	OBL																																																	
7. <i>Pycnanthemum virginianum</i>	5	No	FAC																																																	
8. <i>Fraxinus pennsylvanica</i>	5	No	FACW																																																	
9. <i>Potentilla simplex</i>	5	No	FACU																																																	
10. <i>Apocynum cannabinum</i>	5	No	FACU																																																	
11. <i>Scirpus atrovirens</i>	5	No	OBL																																																	
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	<u>0</u>	= Total Cover																																																		
50% of total cover: <u>0</u>		<u>20</u>	% of total cover: <u>0</u>																																																	
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>  A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).																																																				

SOIL

Sampling Point: W-A18-44 PEM-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 4	10YR 4/2	90	2.5YR 4/6	10	C	M	Silt Loam	
4 - 16	2.5Y 5/3	85	7.5YR 5/8	10	C	M	Sandy Loam	
4 - 16			2.5Y 5/1	5	D	M		
16 - 20	10YR 6/4	70	5YR 5/8	20	C	M	Clay	
16 - 20			2.5Y 5/1	10	D	M		

<sup>1</sup>Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup>Location: PL = Pore Lining, M = Matrix.

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

Restrictive Layer (if observed):	Hydric Soil Present?
Type: <u>None</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Depth (inches): _____	

Remarks:

A positive indication of hydric soil was observed.

Photo of Sample Plot  
North



A19 ext

Photo of Sample Plot East



A19 ext

Photo of Sample Plot  
South



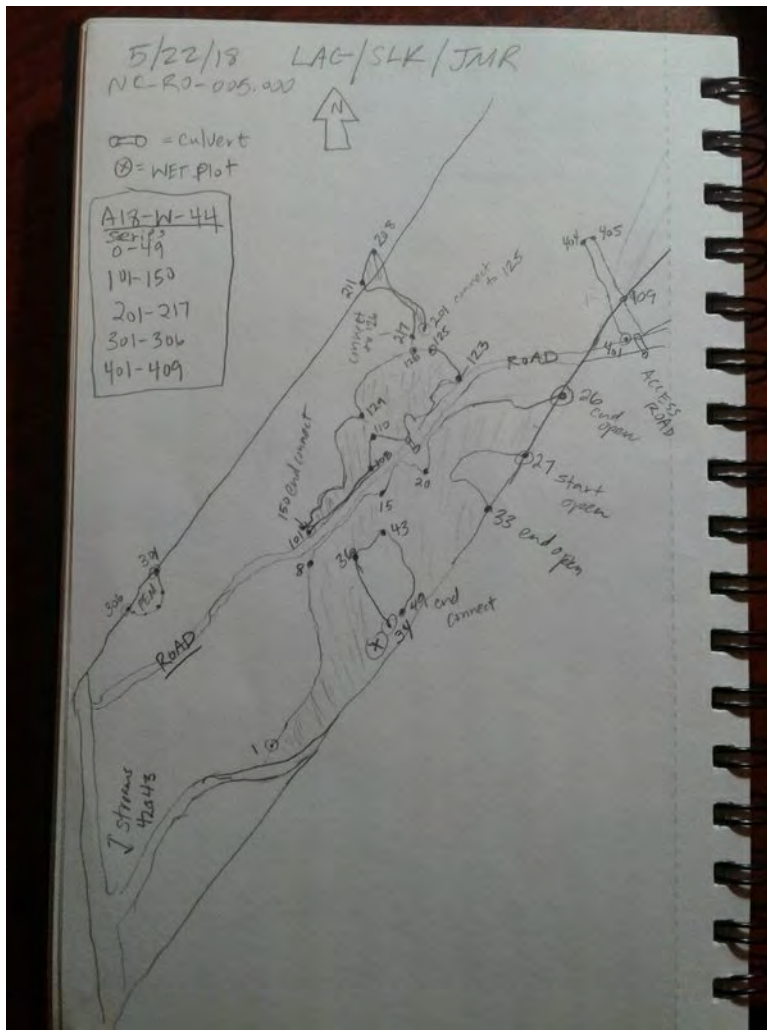
A19 ext

Photo of Sample Plot West



A19 ext

Photo of Sample Plot Sketch









1/14/19 SLK, LAG

NC-RD-005.000

W-A18-44 A19 EXT

↑N



**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: MVP Southgate City/County: Eden, Rockingham Sampling Date: 2018-May-21  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A18-44\_PFO-1  
 Investigator(s): Laura Giese, Joe Roy, Simon King 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: 36.527938 Long: -79.6450237 Datum: WGS84  
 Soil Map Unit Name: Dan River loam, 0 to 2 percent slopes, frequently flooded NWI classification: None  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:  Covertype is PFO. Area is wetland, all three wetland parameters are present. Recent heavy rains .		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>18</u>	
(includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:  The criterion for wetland hydrology is met. Water in borehole within 2" likely from surface.		

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

Sampling Point: W-A18-44\_PFO-1

	Absolute % Cover	Dominant Species?	Indicator Status																																	
<b>Tree Stratum (Plot size: 30)</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 20%; text-align: center;">Total % Cover of:</th> <th style="width: 20%;"></th> <th style="width: 20%; text-align: center;">Multiply By:</th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;"><u>0</u></td> <td>x 1 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>55</u></td> <td>x 2 =</td> <td style="text-align: center;"><u>110</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>30</u></td> <td>x 3 =</td> <td style="text-align: center;"><u>90</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>0</u></td> <td>x 4 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td>x 5 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;"><u>85</u></td> <td>(A)</td> <td style="text-align: center;"><u>200</u> (B)</td> </tr> <tr> <td colspan="4" style="text-align: center;">Prevalence Index = B/A = <u>2.4</u></td> </tr> </tbody> </table> <b>Hydrophytic Vegetation Indicators:</b> ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 <sup>1</sup> ___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		Total % Cover of:		Multiply By:	OBL species	<u>0</u>	x 1 =	<u>0</u>	FACW species	<u>55</u>	x 2 =	<u>110</u>	FAC species	<u>30</u>	x 3 =	<u>90</u>	FACU species	<u>0</u>	x 4 =	<u>0</u>	UPL species	<u>0</u>	x 5 =	<u>0</u>	Column Totals	<u>85</u>	(A)	<u>200</u> (B)	Prevalence Index = B/A = <u>2.4</u>			
	Total % Cover of:		Multiply By:																																	
OBL species	<u>0</u>	x 1 =	<u>0</u>																																	
FACW species	<u>55</u>	x 2 =	<u>110</u>																																	
FAC species	<u>30</u>	x 3 =	<u>90</u>																																	
FACU species	<u>0</u>	x 4 =	<u>0</u>																																	
UPL species	<u>0</u>	x 5 =	<u>0</u>																																	
Column Totals	<u>85</u>	(A)	<u>200</u> (B)																																	
Prevalence Index = B/A = <u>2.4</u>																																				
1. <i>Platanus occidentalis</i>	20	Yes	FACW																																	
2. <i>Acer negundo</i>	20	Yes	FAC																																	
3. _____																																				
4. _____																																				
5. _____																																				
6. _____																																				
7. _____																																				
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"></td> <td style="text-align: center;"><u>40</u></td> <td colspan="2">= Total Cover</td> </tr> <tr> <td>50% of total cover: <u>20</u></td> <td>20% of total cover: <u>8</u></td> <td colspan="2"></td> </tr> </table>						<u>40</u>	= Total Cover		50% of total cover: <u>20</u>	20% of total cover: <u>8</u>																										
	<u>40</u>	= Total Cover																																		
50% of total cover: <u>20</u>	20% of total cover: <u>8</u>																																			
<b>Sapling/Shrub Stratum (Plot size: 15')</b>																																				
1. <i>Fraxinus pennsylvanica</i>	5	Yes	FACW																																	
2. _____																																				
3. _____																																				
4. _____																																				
5. _____																																				
6. _____																																				
7. _____																																				
8. _____																																				
9. _____																																				
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"></td> <td style="text-align: center;"><u>5</u></td> <td colspan="2">= Total Cover</td> </tr> <tr> <td>50% of total cover: <u>2.5</u></td> <td>20% of total cover: <u>1</u></td> <td colspan="2"></td> </tr> </table>					<u>5</u>	= Total Cover		50% of total cover: <u>2.5</u>	20% of total cover: <u>1</u>																											
	<u>5</u>	= Total Cover																																		
50% of total cover: <u>2.5</u>	20% of total cover: <u>1</u>																																			
<b>Herb Stratum (Plot size: 5')</b>																																				
1. <i>Carex tribuloides</i>	20	Yes	FACW																																	
2. <i>Boehmeria cylindrica</i>	10	Yes	FACW																																	
3. <i>Ulmus rubra</i>	10	Yes	FAC																																	
4. _____																																				
5. _____																																				
6. _____																																				
7. _____																																				
8. _____																																				
9. _____																																				
10. _____																																				
11. _____																																				
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"></td> <td style="text-align: center;"><u>40</u></td> <td colspan="2">= Total Cover</td> </tr> <tr> <td>50% of total cover: <u>20</u></td> <td>20% of total cover: <u>8</u></td> <td colspan="2"></td> </tr> </table>					<u>40</u>	= Total Cover		50% of total cover: <u>20</u>	20% of total cover: <u>8</u>																											
	<u>40</u>	= Total Cover																																		
50% of total cover: <u>20</u>	20% of total cover: <u>8</u>																																			
<b>Woody Vine Stratum (Plot size: 30')</b>																																				
1. _____																																				
2. _____																																				
3. _____																																				
4. _____																																				
5. _____																																				
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"></td> <td style="text-align: center;"><u>0</u></td> <td colspan="2">= Total Cover</td> </tr> <tr> <td>50% of total cover: <u>0</u></td> <td>20% of total cover: <u>0</u></td> <td colspan="2"></td> </tr> </table>					<u>0</u>	= Total Cover		50% of total cover: <u>0</u>	20% of total cover: <u>0</u>																											
	<u>0</u>	= Total Cover																																		
50% of total cover: <u>0</u>	20% of total cover: <u>0</u>																																			
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>  A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).																																				

SOIL

Sampling Point: W-A18-44\_PFO-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 4	10YR 3/2	95	7.5YR 4/6	5	C	M	Silt Loam	
4 - 18	10YR 4/2	50	5YR 4/6	10	C	M	Silty Clay Loam	Mn soft masses
4 - 18	10YR 4/3	40						
18 - 22	2.5Y 5/2	85	7.5YR 4/6	15	C	M	Silt Loam	

<sup>1</sup>Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup>Location: PL = Pore Lining, M = Matrix.

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

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

<b>Restrictive Layer (if observed):</b>		<b>Hydric Soil Present?</b>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Type:	None		
Depth (inches):			

**Remarks:**

A positive indication of hydric soil was observed.

Photo of Sample Plot  
North



A19 ext

Photo of Sample Plot  
East



A19 ext



Photo of Sample Plot  
South



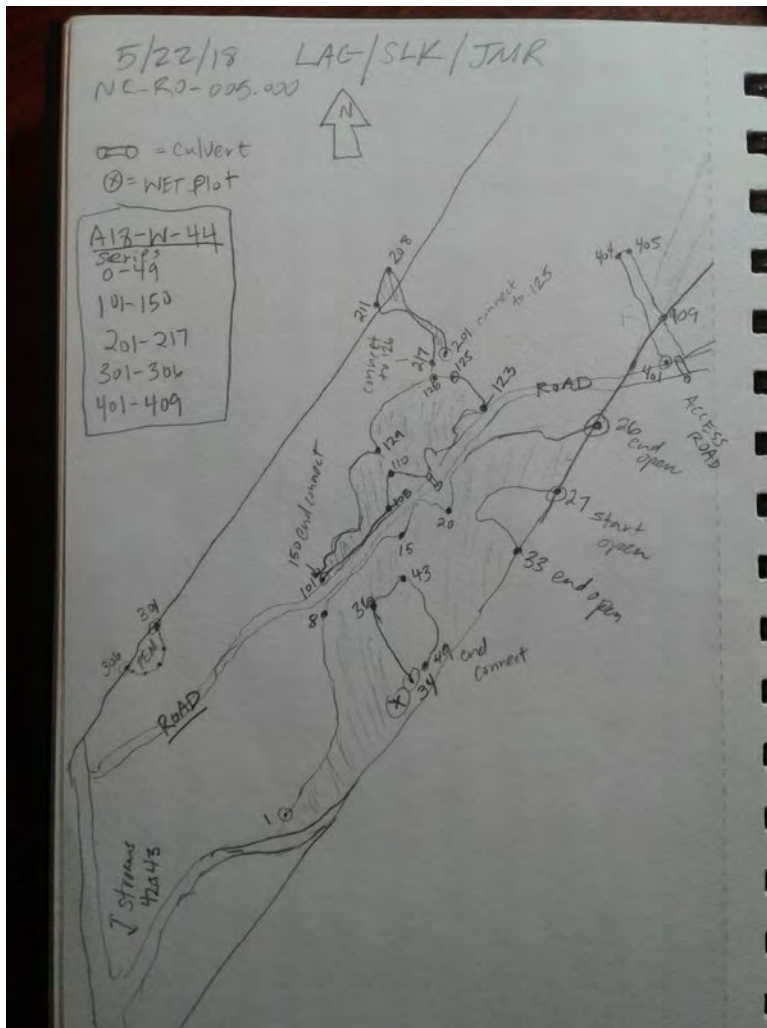
A19 ext

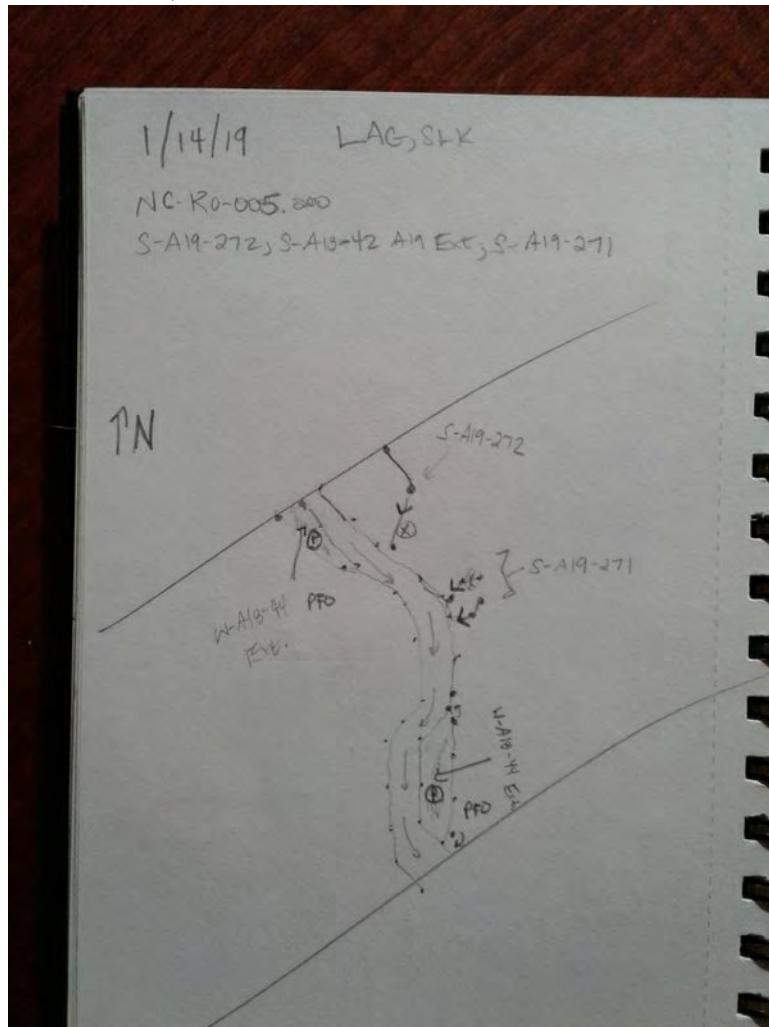
Photo of Sample Plot  
West



A19 ext

Photo of Sample Plot  
Sketch





**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: MVP Southgate City/County: Leaksville, Rockingha... Sampling Date: 2019-Jan-14  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A18-44\_PSS-1  
 Investigator(s): Laura Giese, Simon King, Simon King Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Flood Plain Local relief (concave, convex, none): Flat Slope (%): 0 to 1  
 Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5287974 Long: -79.6460534 Datum: WGS84  
 Soil Map Unit Name: Dan River loam, 0 to 2 percent slopes, frequently flooded NWI classification:  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:  Covertype is PSS. Area is wetland, all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input checked="" type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:  The criterion for wetland hydrology is met.	

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

Sampling Point: W-A18-44 PSS-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	2 (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	3 (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	66.7 (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>	
5. _____	_____	_____	_____	<u>Total % Cover of:</u>	<u>Multiply By:</u>
6. _____	_____	_____	_____	OBL species	0 x 1 = 0
7. _____	_____	_____	_____	FACW species	20 x 2 = 40
	0 = Total Cover			FAC species	55 x 3 = 165
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>		FACU species	10 x 4 = 40
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15'</u> )				UPL species	0 x 5 = 0
1. <i>Acer negundo</i>	45	Yes	FAC	Column Totals	85 (A) 245 (B)
2. <i>Liquidambar styraciflua</i>	10	No	FAC	Prevalence Index = B/A =	<u>2.9</u>
3. <i>Platanus occidentalis</i>	10	No	FACW	<b>Hydrophytic Vegetation Indicators:</b>	
4. _____	_____	_____	_____	____ 1 - Rapid Test for Hydrophytic Vegetation	
5. _____	_____	_____	_____	✓ 2 - Dominance Test is >50%	
6. _____	_____	_____	_____	✓ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>	
7. _____	_____	_____	_____	____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
8. _____	_____	_____	_____	____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
9. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
	65 = Total Cover			<b>Definitions of Four Vegetation Strata:</b>	
	50% of total cover: <u>32.5</u>	20% of total cover: <u>13</u>		<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
<b>Herb Stratum</b> (Plot size: <u>5'</u> )				<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
1. <i>Allium vineale</i>	10	Yes	FACU	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
2. <i>Poa palustris</i>	10	Yes	FACW	<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
3. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
	20 = Total Cover				
	50% of total cover: <u>10</u>	20% of total cover: <u>4</u>			
<b>Woody Vine Stratum</b> (Plot size: <u>30'</u> )					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
	0 = Total Cover				
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>			
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>					
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).					

SOIL

Sampling Point: W-A18-44 PSS-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 4	10YR 4/3	100					Silt Loam	
4 - 8	10YR 4/3	70	10YR 5/1	20	D	M	Silt Loam	
4 - 8			7.5YR 4/4	10	C	M	Silt Loam	
8 - 14	2.5Y 4/2	90	7.5YR 4/4	10	C	M	Silt Loam	
14 - 20	2.5Y 6/4	60	2.5Y 5/2	40	C	M	Silty Clay Loam	manganese concretions

<sup>1</sup>Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup>Location: PL = Pore Lining, M = Matrix.

**Hydric Soil Indicators:**

- 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<sup>3</sup>:**

- 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)

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

**Restrictive Layer (if observed):**

Type: None  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

**Remarks:**

A positive indication of hydric soil was observed. 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



Photo of Sample Plot Sketch



**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: MVP Southgate City/County: Elon, Alamance Sampling Date: 2018-June-05  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A18-119\_PFO-1  
 Investigator(s): Laura Giese, Jeff Vandever, Nate Renaudin 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: 36.1999034 Long: -79.5008216 Datum: WGS84  
 Soil Map Unit Name: Chewacla loam, 0 to 2 percent slopes, frequently flooded NWI classification: None  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:  Covertype is PFO. Area is wetland, all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>			<u>Secondary Indicators (minimum of two required)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)			
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)			
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)			
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)			
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>					
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):			
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):			
(includes capillary fringe)					
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-A18-119 PFO-1

	Absolute % Cover	Dominant Species?	Indicator Status																																									
<b>Tree Stratum (Plot size: <u>30</u>)</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 10%; text-align: center;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 10%; text-align: center;">Multiply By:</th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 1 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>30</u></td> <td></td> <td style="text-align: center;">x 2 =</td> <td style="text-align: center;"><u>60</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>120</u></td> <td></td> <td style="text-align: center;">x 3 =</td> <td style="text-align: center;"><u>360</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 4 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 5 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;"><u>150</u></td> <td style="text-align: center;">(A)</td> <td></td> <td style="text-align: center;"><u>420</u> (B)</td> </tr> <tr> <td colspan="4" style="text-align: right;">Prevalence Index = B/A =</td> <td style="text-align: center;"><u>2.8</u></td> </tr> </tbody> </table>		Total % Cover of:		Multiply By:		OBL species	<u>0</u>		x 1 =	<u>0</u>	FACW species	<u>30</u>		x 2 =	<u>60</u>	FAC species	<u>120</u>		x 3 =	<u>360</u>	FACU species	<u>0</u>		x 4 =	<u>0</u>	UPL species	<u>0</u>		x 5 =	<u>0</u>	Column Totals	<u>150</u>	(A)		<u>420</u> (B)	Prevalence Index = B/A =				<u>2.8</u>
	Total % Cover of:		Multiply By:																																									
OBL species	<u>0</u>		x 1 =		<u>0</u>																																							
FACW species	<u>30</u>		x 2 =		<u>60</u>																																							
FAC species	<u>120</u>		x 3 =		<u>360</u>																																							
FACU species	<u>0</u>		x 4 =		<u>0</u>																																							
UPL species	<u>0</u>		x 5 =		<u>0</u>																																							
Column Totals	<u>150</u>	(A)			<u>420</u> (B)																																							
Prevalence Index = B/A =					<u>2.8</u>																																							
1. <i>Acer rubrum</i>	65	Yes	FAC																																									
2. _____																																												
3. _____																																												
4. _____																																												
5. _____																																												
6. _____																																												
7. _____																																												
<u>65</u> = Total Cover																																												
50% of total cover: <u>32.5</u>		20% of total cover: <u>13</u>																																										
<b>Sapling/Shrub Stratum (Plot size: <u>15</u>)</b>																																												
1. <i>Liquidambar styraciflua</i>	5	Yes	FAC																																									
2. <i>Nyssa sylvatica</i>	5	Yes	FAC																																									
3. _____																																												
4. _____																																												
5. _____																																												
6. _____																																												
7. _____																																												
8. _____																																												
9. _____																																												
<u>10</u> = Total Cover																																												
50% of total cover: <u>5</u>		20% of total cover: <u>2</u>																																										
<b>Herb Stratum (Plot size: <u>5</u>)</b>																																												
1. <i>Microstegium vimineum</i>	45	Yes	FAC																																									
2. <i>Ilex verticillata</i>	15	Yes	FACW																																									
3. <i>Carex tribuloides</i>	10	No	FACW																																									
4. <i>Arisaema triphyllum</i>	5	No	FACW																																									
5. _____																																												
6. _____																																												
7. _____																																												
8. _____																																												
9. _____																																												
10. _____																																												
11. _____																																												
<u>75</u> = Total Cover																																												
50% of total cover: <u>37.5</u>		20% of total cover: <u>15</u>																																										
<b>Woody Vine Stratum (Plot size: <u>30</u>)</b>																																												
1. _____																																												
2. _____																																												
3. _____																																												
4. _____																																												
5. _____																																												
<u>0</u> = Total Cover																																												
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>																																										
<b>Hydrophytic Vegetation Indicators:</b> _____ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 <sup>1</sup> _____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic																																												
<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																																												
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																																												
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>  A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).																																												

SOIL

Sampling Point: W-A18-119\_PFO-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>		
0 - 7	10YR 4/2	95	10YR 5/8	5	C	M	Silt Loam
7 - 13	10YR 5/2	70	10YR 5/8	10	C	M	Silt Loam
7 - 13			2.5Y 6/1	20	D	M	
13 - 20	10YR 6/1	90	7.5YR 5/8	10	C	M	Sandy Loam

<sup>1</sup>Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup>Location: PL = Pore Lining, M = Matrix.

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

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

<b>Restrictive Layer (if observed):</b>	<b>Hydric Soil Present?</b>
Type: <u>None</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Depth (inches): _____	

Remarks:

A positive indication of hydric soil was observed.

Photo of Sample Plot  
North



A19 ext

Photo of Sample Plot  
East



A19 ext

Photo of Sample Plot  
South



A19 ext

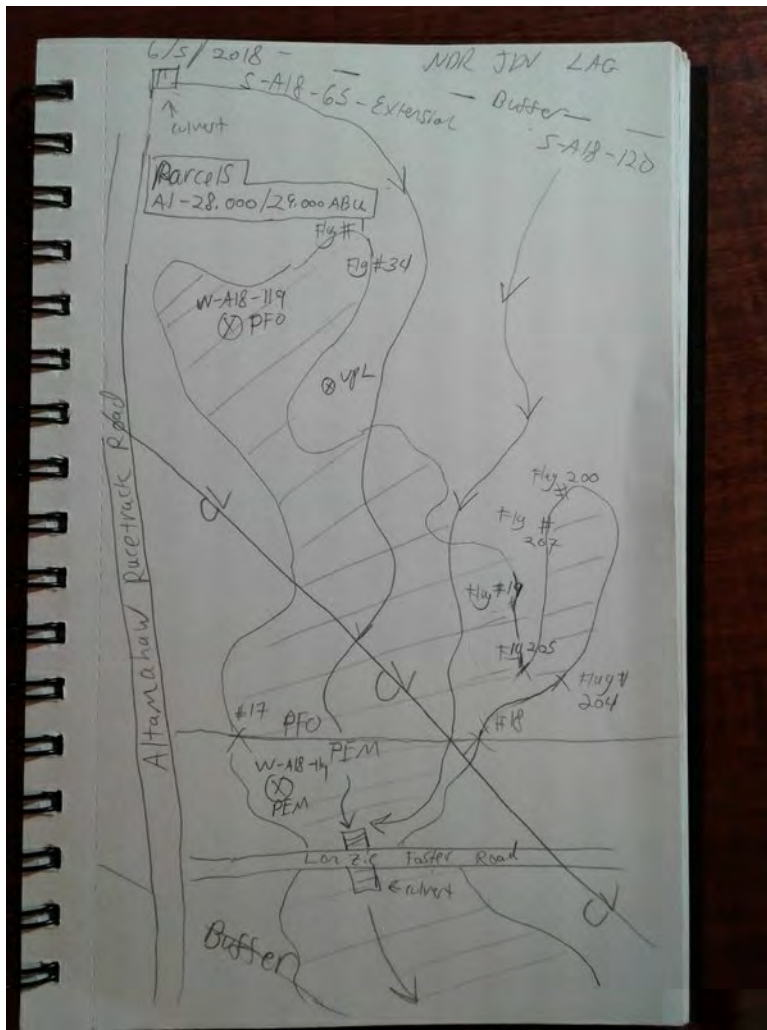


Photo of Sample Plot  
West



A19 ext

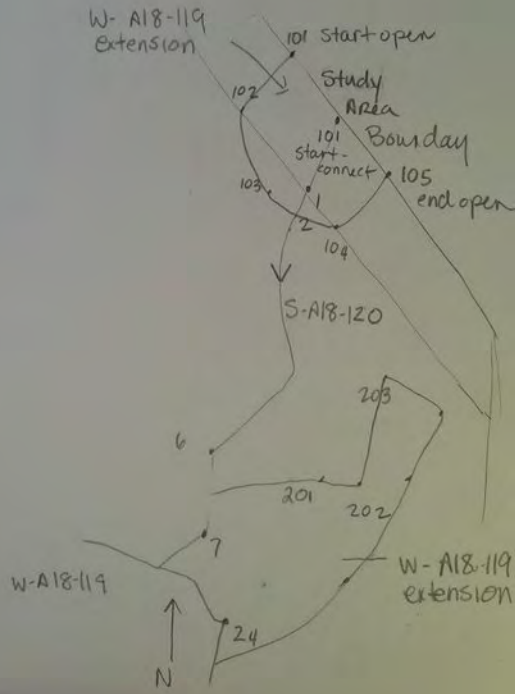
Photo of Sample Plot  
Sketch



1/21/19 LAG, SCT

Parcel: NC-AL-028.000

Features: W-A18-119 extension  
S-A18-120 extension



**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: MVP Southgate City/County: Reidsville, Rockingham Sampling Date: 2018-June-23  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A18-184\_PEM-1  
 Investigator(s): Laura Giese, Jake Brillo, Susan Thebert Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Back slope Local relief (concave, convex, none): Concave Slope (%): 2 to 5  
 Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.275936 Long: -79.5590737 Datum: WGS84  
 Soil Map Unit Name: Helena sandy loam, 2 to 8 percent slopes NWI classification: None  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:  Covertypes is PEM. Area is wetland, all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>0</u>	
(includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  		
Remarks:  The criterion for wetland hydrology is met. Soil is episaturated. Saturated from 0-3".		

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

Sampling Point: W-A18-184 PEM-1

	Absolute % Cover	Dominant Species?	Indicator Status																																									
<b>Tree Stratum (Plot size: <u>30</u>)</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 20%; text-align: center;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 20%; text-align: center;">Multiply By:</th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;"><u>60</u></td> <td></td> <td style="text-align: center;">x 1 =</td> <td style="text-align: center;"><u>60</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>25</u></td> <td></td> <td style="text-align: center;">x 2 =</td> <td style="text-align: center;"><u>50</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 3 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 4 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 5 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;"><u>85</u></td> <td style="text-align: center;">(A)</td> <td></td> <td style="text-align: center;"><u>110</u> (B)</td> </tr> <tr> <td colspan="4" style="text-align: right;">Prevalence Index = B/A =</td> <td style="text-align: center;"><u>1.3</u></td> </tr> </tbody> </table>		Total % Cover of:		Multiply By:		OBL species	<u>60</u>		x 1 =	<u>60</u>	FACW species	<u>25</u>		x 2 =	<u>50</u>	FAC species	<u>0</u>		x 3 =	<u>0</u>	FACU species	<u>0</u>		x 4 =	<u>0</u>	UPL species	<u>0</u>		x 5 =	<u>0</u>	Column Totals	<u>85</u>	(A)		<u>110</u> (B)	Prevalence Index = B/A =				<u>1.3</u>
	Total % Cover of:		Multiply By:																																									
OBL species	<u>60</u>		x 1 =		<u>60</u>																																							
FACW species	<u>25</u>		x 2 =		<u>50</u>																																							
FAC species	<u>0</u>		x 3 =		<u>0</u>																																							
FACU species	<u>0</u>		x 4 =		<u>0</u>																																							
UPL species	<u>0</u>		x 5 =		<u>0</u>																																							
Column Totals	<u>85</u>	(A)			<u>110</u> (B)																																							
Prevalence Index = B/A =					<u>1.3</u>																																							
1. _____	_____	_____	_____																																									
2. _____	_____	_____	_____																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
5. _____	_____	_____	_____																																									
6. _____	_____	_____	_____																																									
7. _____	_____	_____	_____																																									
<u>0</u> = Total Cover																																												
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																												
<b>Sapling/Shrub Stratum (Plot size: <u>15</u>)</b>																																												
1. _____	_____	_____	_____																																									
2. _____	_____	_____	_____																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
5. _____	_____	_____	_____																																									
6. _____	_____	_____	_____																																									
7. _____	_____	_____	_____																																									
8. _____	_____	_____	_____																																									
9. _____	_____	_____	_____																																									
<u>0</u> = Total Cover																																												
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																												
<b>Herb Stratum (Plot size: <u>5</u>)</b>																																												
1. <u><i>Symphytotrichum puniceum</i></u>	<u>20</u>	Yes	OBL	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic  <b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.   Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																																								
2. <u><i>Juncus effusus</i></u>	<u>15</u>	Yes	FACW																																									
3. <u><i>Carex crinita</i></u>	<u>15</u>	Yes	OBL																																									
4. <u><i>Impatiens capensis</i></u>	<u>10</u>	No	FACW																																									
5. <u><i>Alnus serrulata</i></u>	<u>10</u>	No	OBL																																									
6. <u><i>Persicaria sagittata</i></u>	<u>10</u>	No	OBL																																									
7. <u><i>Sagittaria latifolia</i></u>	<u>5</u>	No	OBL																																									
8. _____	_____	_____	_____																																									
9. _____	_____	_____	_____																																									
10. _____	_____	_____	_____																																									
11. _____	_____	_____	_____																																									
<u>85</u> = Total Cover																																												
50% of total cover: <u>42.5</u> 20% of total cover: <u>17</u>																																												
<b>Woody Vine Stratum (Plot size: <u>30</u>)</b>																																												
1. _____	_____	_____	_____																																									
2. _____	_____	_____	_____																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
5. _____	_____	_____	_____																																									
<u>0</u> = Total Cover																																												
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																												
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>																																												
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).																																												

SOIL

Sampling Point: W-A18-184\_PEM-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>		
0 - 3	10YR 3/2	93	10YR 4/1	5	D	M	Silt Loam
0 - 3			10YR 4/6	2	C	M	
3 - 11	2.5Y 5/1	90	7.5YR 5/8	10	C	M/PL	Silt Loam
11 - 20	N 5/	90	7.5YR 5/8	10	C	M	Sandy Clay Loam

<sup>1</sup>Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup>Location: PL = Pore Lining, M = Matrix.

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

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

<b>Restrictive Layer (if observed):</b> Type: <u>None</u> Depth (inches): _____	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:

A positive indication of hydric soil was observed.

Photo of Sample Plot  
North



extension B19 01/18/219



Photo of Sample Plot East



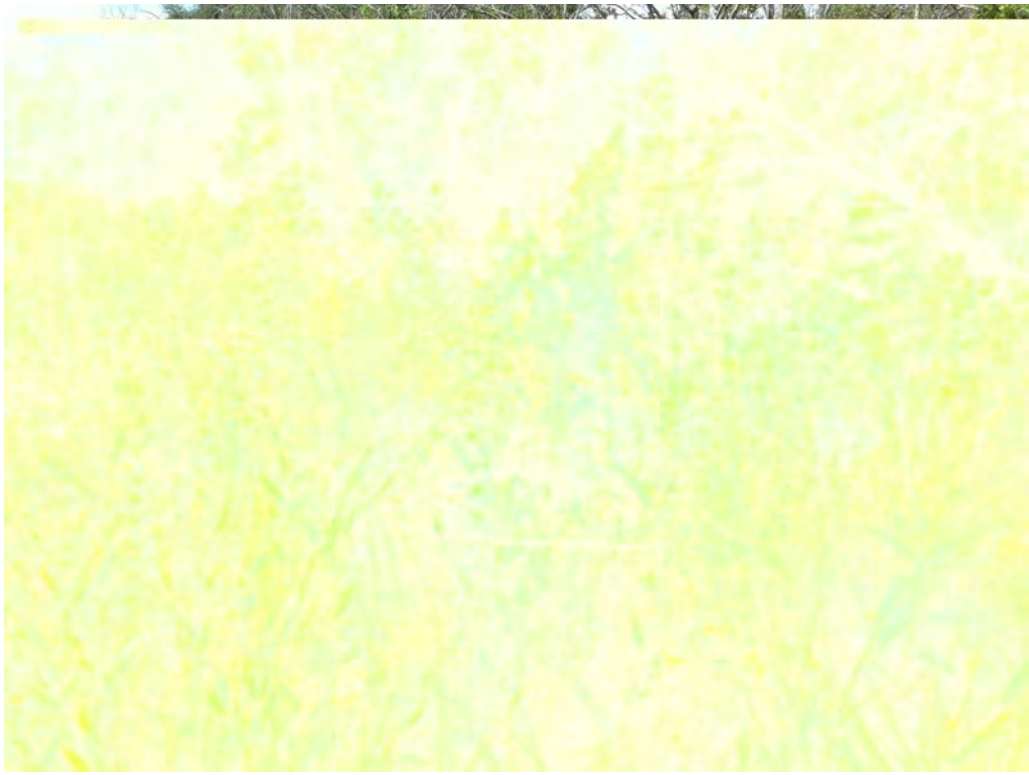




extension B19 01/18/2019



Photo of Sample Plot  
South



extension B19 01/18/2019



Photo of Sample Plot West





extension B19 01/18/2019



Photo of Sample Plot  
Sketch

6.23-18 LAG/JJB

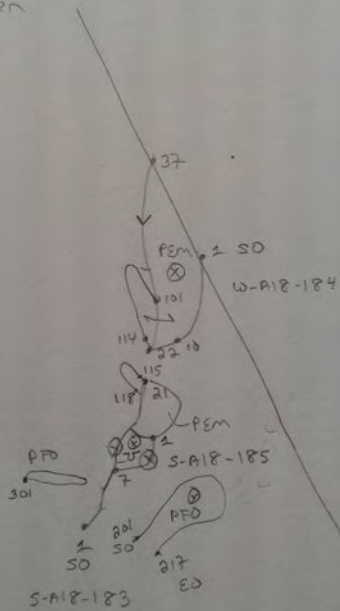
NC-RD-171.000

NC-RD-172.000

⊗ PLOT

SO - Start open

EO - End open



↑ N

11/21/19 SET, JJB

Parcel: NC-RD-171.000

Features: W-B19-184

extension of W-A18-184

S-B19-183

extension of S-A18-183

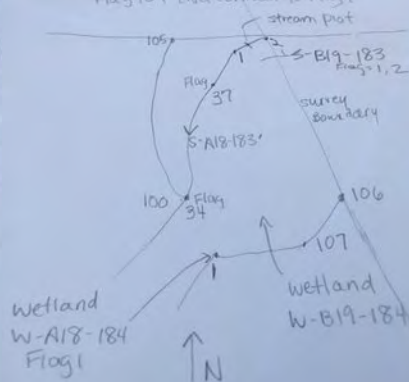
Flags 100-105

Flag 100 start connect to stream 183

Flag 105 end open

Flag 106 start open

Flag 107 end connect to Flag 1



**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: MVP Southgate City/County: Reidsville, Rockingham Sampling Date: 2018-June-23  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A18-184\_PFO-1  
 Investigator(s): Laura Giese, Jake Brillo, Susan Thebert Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Back slope Local relief (concave, convex, none): Concave Slope (%): 2 to 5  
 Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.2748826 Long: -79.558959 Datum: WGS84  
 Soil Map Unit Name: Helena sandy loam, 2 to 8 percent slopes NWI classification: None  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:  Covertypes is PFO. Area is wetland, all three wetland parameters are present.		

**HYDROLOGY**

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

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

Sampling Point: W-A18-184 PFO-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. <i>Acer rubrum</i>	30	Yes	FAC	Number of Dominant Species That Are OBL, FACW, or FAC:	10 (A)
2. <i>Fraxinus caroliniana</i>	20	Yes	OBL	Total Number of Dominant Species Across All Strata:	10 (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC:	100 (A/B)
4. _____				<b>Prevalence Index worksheet:</b>	
5. _____				<u>Total % Cover of:</u>	<u>Multiply By:</u>
6. _____				OBL species	65 x 1 = 65
7. _____				FACW species	70 x 2 = 140
	50 = Total Cover			FAC species	30 x 3 = 90
	50% of total cover: <u>25</u>	20% of total cover: <u>10</u>		FACU species	0 x 4 = 0
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				UPL species	0 x 5 = 0
1. <i>Ilex verticillata</i>	35	Yes	FACW	Column Totals	165 (A) 295 (B)
2. <i>Fraxinus caroliniana</i>	10	Yes	OBL	Prevalence Index = B/A =	<u>1.8</u>
3. _____				<b>Hydrophytic Vegetation Indicators:</b>	
4. _____				____ 1 - Rapid Test for Hydrophytic Vegetation	
5. _____				<input checked="" type="checkbox"/> 2 - Dominance Test is >50%	
6. _____				<input checked="" type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>	
7. _____				____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
8. _____				____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
9. _____				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
	45 = Total Cover			<b>Definitions of Four Vegetation Strata:</b>	
	50% of total cover: <u>22.5</u>	20% of total cover: <u>9</u>		<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
<b>Herb Stratum</b> (Plot size: <u>5</u> )				<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
1. <i>Carex crinita</i>	10	Yes	OBL	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
2. <i>Juncus effusus</i>	10	Yes	FACW	<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
3. <i>Impatiens capensis</i>	10	Yes	FACW	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
4. <i>Glyceria striata</i>	10	Yes	OBL		
5. <i>Arisaema triphyllum</i>	10	Yes	FACW		
6. <i>Osmunda spectabilis</i>	10	Yes	OBL		
7. <i>Eupatorium perfoliatum</i>	5	No	FACW		
8. <i>Symphotrichum puniceum</i>	5	No	OBL		
9. _____					
10. _____					
11. _____					
	70 = Total Cover				
	50% of total cover: <u>35</u>	20% of total cover: <u>14</u>			
<b>Woody Vine Stratum</b> (Plot size: <u>30</u> )					
1. _____					
2. _____					
3. _____					
4. _____					
5. _____					
	0 = Total Cover				
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>			
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>					
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).					

SOIL

Sampling Point: W-A18-184\_PFO-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 4	10YR 3/2	95	10YR 5/6	5	C	M	Mucky Silt Loam	
4 - 18	5Y 3/1	98	2.5Y 5/1	2	D	M	Mucky Silt Loam	

<sup>1</sup>Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup>Location: PL = Pore Lining, M = Matrix.

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

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

Restrictive Layer (if observed):	Hydric Soil Present?
Type: <u>None</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Depth (inches): _____	

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

6.23.18 LAG/JJB

NC-RO-171.000

NC-RO-172.000

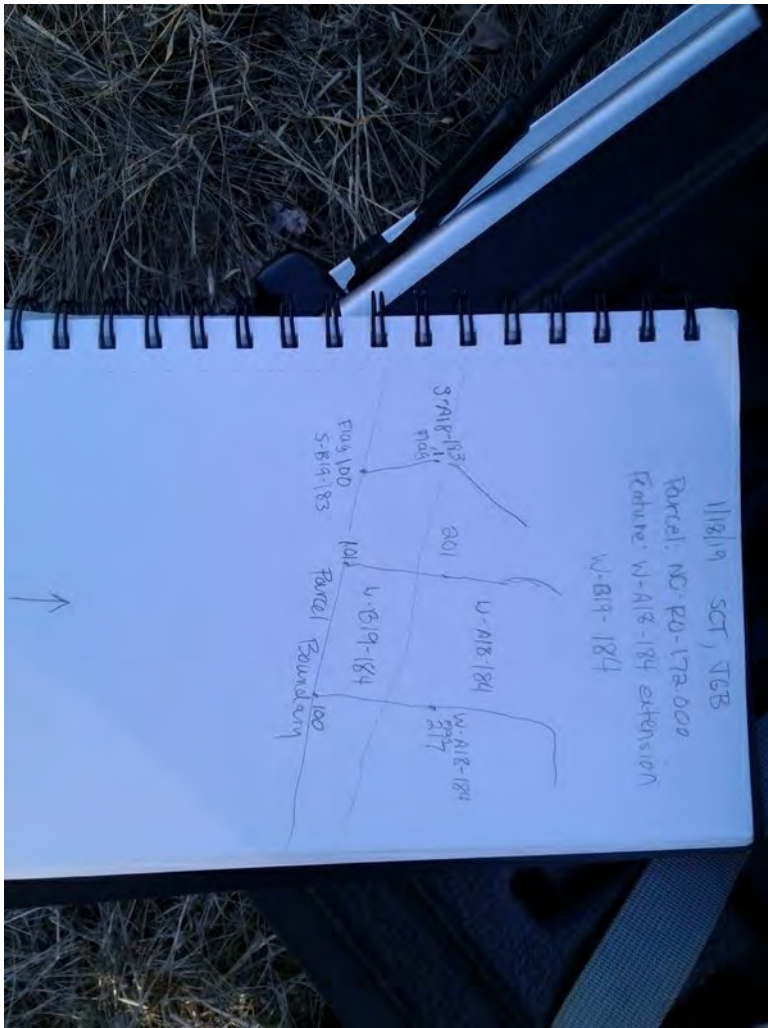
⊗ PLOT

SO - start open

EO - End open



↑ N



**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: MVP Southgate City/County: Eden, Rockingham Co... Sampling Date: 2019-Jan-07  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-257\_PEM-1  
 Investigator(s): Laura Giese, Simon King Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Foot slope Local relief (concave, convex, none): Concave Slope (%): 1 to 3  
 Subregion (LRR or MLRA): Lat: 36.5136252 Long: -79.7215924 Datum: WGS84  
 Soil Map Unit Name: Leaksville silt loam, 0 to 4 percent slopes NWI classification: None  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:  Covertypes is PEM. Area is wetland, all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)  <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:  The criterion for wetland hydrology is met. pockets of standing water.	

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

Sampling Point: W-A19-257 PEM-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>	
5. _____	_____	_____	_____	<u>Total % Cover of:</u>	<u>Multiply By:</u>
6. _____	_____	_____	_____	OBL species	<u>50</u> x 1 = <u>50</u>
7. _____	_____	_____	_____	FACW species	<u>30</u> x 2 = <u>60</u>
	<u>0</u> = Total Cover			FAC species	<u>0</u> x 3 = <u>0</u>
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>		FACU species	<u>0</u> x 4 = <u>0</u>
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				UPL species	<u>0</u> x 5 = <u>0</u>
1. <i>Juniperus virginiana</i>	_____	No	FACU	Column Totals	<u>(A)</u> <u>(B)</u>
2. _____	_____	_____	_____	Prevalence Index = B/A = _____	
3. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b>	
4. _____	_____	_____	_____	<input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation	
5. _____	_____	_____	_____	<input checked="" type="checkbox"/> 2 - Dominance Test is >50%	
6. _____	_____	_____	_____	<input type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>	
7. _____	_____	_____	_____	<input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
8. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
9. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
	<u>0</u> = Total Cover			<b>Definitions of Four Vegetation Strata:</b>	
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>		<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
<b>Herb Stratum</b> (Plot size: <u>5' radius</u> )				<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
1. <i>Scirpus atrovirens</i>	40	Yes	OBL	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
2. <i>Juncus effusus</i>	20	Yes	FACW	<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
3. <i>Poa palustris</i>	10	No	FACW	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
4. <i>Mimulus ringens</i>	10	No	OBL		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
	<u>80</u> = Total Cover				
	50% of total cover: <u>40</u>	20% of total cover: <u>16</u>			
<b>Woody Vine Stratum</b> (Plot size: <u>    </u> )					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
	<u>0</u> = Total Cover				
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>			
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>					
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).					



Hydrology Photos



Photo of Sample Plot North





Photo of Sample Plot East



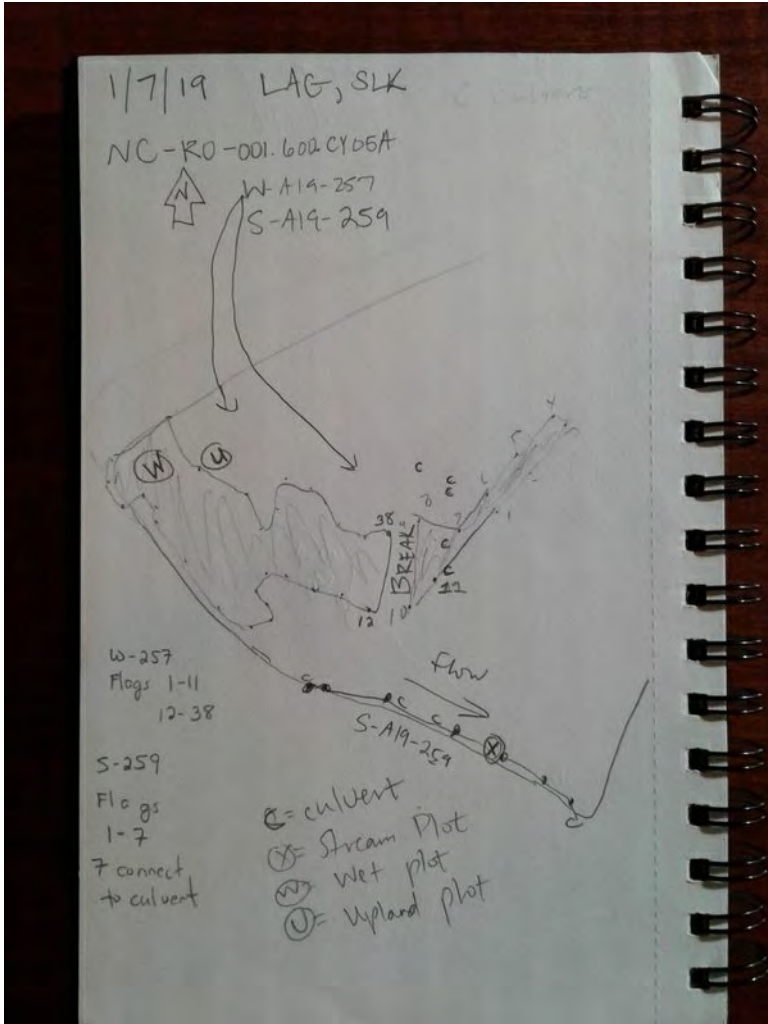
Photo of Sample Plot South



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: Eden, Rockingham Co... Sampling Date: 2019-Jan-07  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-257\_UPL-1  
 Investigator(s): Laura Giese, Simon King Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Foot slope Local relief (concave, convex, none): Convex Slope (%): 1 to 3  
 Subregion (LRR or MLRA): Lat: 36.5136027 Long: -79.7215022 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:  Covertypes is UPL. Area is upland, not all three wetland parameters are present.		

**HYDROLOGY**

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

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

Sampling Point: W-A19-257 UPL-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	1 (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	3 (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	33.3 (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>	
5. _____	_____	_____	_____	<u>Total % Cover of:</u>	<u>Multiply By:</u>
6. _____	_____	_____	_____	OBL species	0 x 1 = 0
7. _____	_____	_____	_____	FACW species	0 x 2 = 0
	0 = Total Cover			FAC species	25 x 3 = 75
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>		FACU species	45 x 4 = 180
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				UPL species	20 x 5 = 100
1. _____	_____	_____	_____	Column Totals	90 (A) 355 (B)
2. _____	_____	_____	_____	Prevalence Index = B/A = <u>3.9</u>	
3. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b>	
4. _____	_____	_____	_____	____ 1 - Rapid Test for Hydrophytic Vegetation	
5. _____	_____	_____	_____	____ 2 - Dominance Test is > 50%	
6. _____	_____	_____	_____	____ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>	
7. _____	_____	_____	_____	____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
8. _____	_____	_____	_____	____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
9. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
	0 = Total Cover			<b>Definitions of Four Vegetation Strata:</b>	
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>		<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
<b>Herb Stratum</b> (Plot size: <u>5' radius</u> )				<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
1. <i>Festuca rubra</i>	40	Yes	FACU	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
2. <i>Setaria pumila</i>	25	Yes	FAC	<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
3. <i>Plantago lanceolata</i>	20	Yes	UPL		
4. <i>Andropogon virginicus</i>	5	No	FACU		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
	90 = Total Cover				
	50% of total cover: <u>45</u>	20% of total cover: <u>18</u>			
<b>Woody Vine Stratum</b> (Plot size: <u>    </u> )					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
	0 = Total Cover				
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>			
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>					
Fallow field. No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).					

SOIL

Sampling Point: W-A19-257 UPL-1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 2	10YR 3/2	100					Silt Loam	
2 - 7	10YR 4/3	100					Gravelly Clay Loam	

<sup>1</sup>Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains.   <sup>2</sup>Location: PL = Pore Lining, M = Matrix.

<b>Hydric Soil Indicators:</b> ___ 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)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> ___ 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)
--	--	---

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

<b>Restrictive Layer (if observed):</b> Type: <u>                  Gravel                  </u> Depth (inches): <u>                  7                  </u>	<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
--	---

Remarks:

No positive indication of hydric soils was observed. No field indicators of hydric soils found in top 7 inches .

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: Eden, Rockingham Co... Sampling Date: 2019-Jan-07  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-258\_PEM-1  
 Investigator(s): Laura Giese, Simon King Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1 to 3  
 Subregion (LRR or MLRA): Lat: 36.5138708 Long: -79.7181801 Datum: WGS84  
 Soil Map Unit Name: Leaksville silt loam, 0 to 4 percent slopes NWI classification:  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:  Covertype is PEM. Area is wetland, all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>4</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:  The criterion for wetland hydrology is met.	



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

Sampling Point: W-A19-258 PEM-1

	Absolute % Cover	Dominant Species?	Indicator Status																																									
<b>Tree Stratum (Plot size: <u>30</u>)</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 20%; text-align: center;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 20%; text-align: center;">Multiply By:</th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;"><u>40</u></td> <td></td> <td style="text-align: center;">x 1 =</td> <td style="text-align: center;"><u>40</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>25</u></td> <td></td> <td style="text-align: center;">x 2 =</td> <td style="text-align: center;"><u>50</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>5</u></td> <td></td> <td style="text-align: center;">x 3 =</td> <td style="text-align: center;"><u>15</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 4 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 5 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;"><u>70</u></td> <td style="text-align: center;">(A)</td> <td></td> <td style="text-align: center;"><u>105</u> (B)</td> </tr> <tr> <td colspan="4" style="text-align: right;">Prevalence Index = B/A =</td> <td style="text-align: center;"><u>1.5</u></td> </tr> </tbody> </table>		Total % Cover of:		Multiply By:		OBL species	<u>40</u>		x 1 =	<u>40</u>	FACW species	<u>25</u>		x 2 =	<u>50</u>	FAC species	<u>5</u>		x 3 =	<u>15</u>	FACU species	<u>0</u>		x 4 =	<u>0</u>	UPL species	<u>0</u>		x 5 =	<u>0</u>	Column Totals	<u>70</u>	(A)		<u>105</u> (B)	Prevalence Index = B/A =				<u>1.5</u>
	Total % Cover of:		Multiply By:																																									
OBL species	<u>40</u>		x 1 =		<u>40</u>																																							
FACW species	<u>25</u>		x 2 =		<u>50</u>																																							
FAC species	<u>5</u>		x 3 =		<u>15</u>																																							
FACU species	<u>0</u>		x 4 =		<u>0</u>																																							
UPL species	<u>0</u>		x 5 =		<u>0</u>																																							
Column Totals	<u>70</u>	(A)			<u>105</u> (B)																																							
Prevalence Index = B/A =					<u>1.5</u>																																							
1. _____	_____	_____	_____																																									
2. _____	_____	_____	_____																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
5. _____	_____	_____	_____																																									
6. _____	_____	_____	_____																																									
7. _____	_____	_____	_____																																									
<u>0</u> = Total Cover																																												
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																												
<b>Sapling/Shrub Stratum (Plot size: <u>15</u>)</b>																																												
1. _____	_____	_____	_____																																									
2. _____	_____	_____	_____																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
5. _____	_____	_____	_____																																									
6. _____	_____	_____	_____																																									
7. _____	_____	_____	_____																																									
8. _____	_____	_____	_____																																									
9. _____	_____	_____	_____																																									
<u>0</u> = Total Cover																																												
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																												
<b>Herb Stratum (Plot size: <u>5' radius</u>)</b>																																												
1. <u>Scirpus atrovirens</u>	<u>25</u>	Yes	OBL																																									
2. <u>Juncus effusus</u>	<u>20</u>	Yes	FACW																																									
3. <u>Mimulus ringens</u>	<u>15</u>	Yes	OBL																																									
4. <u>Solidago gigantea</u>	<u>5</u>	No	FACW																																									
5. <u>Rumex crispus</u>	<u>5</u>	No	FAC																																									
6. _____	_____	_____	_____																																									
7. _____	_____	_____	_____																																									
8. _____	_____	_____	_____																																									
9. _____	_____	_____	_____																																									
10. _____	_____	_____	_____																																									
11. _____	_____	_____	_____																																									
<u>70</u> = Total Cover																																												
50% of total cover: <u>35</u> 20% of total cover: <u>14</u>																																												
<b>Woody Vine Stratum (Plot size: <u>    </u>)</b>																																												
1. _____	_____	_____	_____																																									
2. _____	_____	_____	_____																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
5. _____	_____	_____	_____																																									
<u>0</u> = Total Cover																																												
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																												
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>																																												
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).																																												
<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																																												

SOIL

Sampling Point: W-A19-258 PEM-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 5	5Y 4/1	95	7.5YR 4/6	5	C	M	Silt Loam	
5 - 16	5Y 5/1	95	7.5YR 4/6	5	C	M/PL	Gravelly Clay Loam	manganese concretions

<sup>1</sup>Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup>Location: PL = Pore Lining, M = Matrix.

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

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

Restrictive Layer (if observed):	Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Type: <u>Compacted clay</u>		
Depth (inches): <u>16</u>		

Remarks:

The criterion for hydric soil is met.

Photo of Sample Plot North



Photo of Sample Plot East



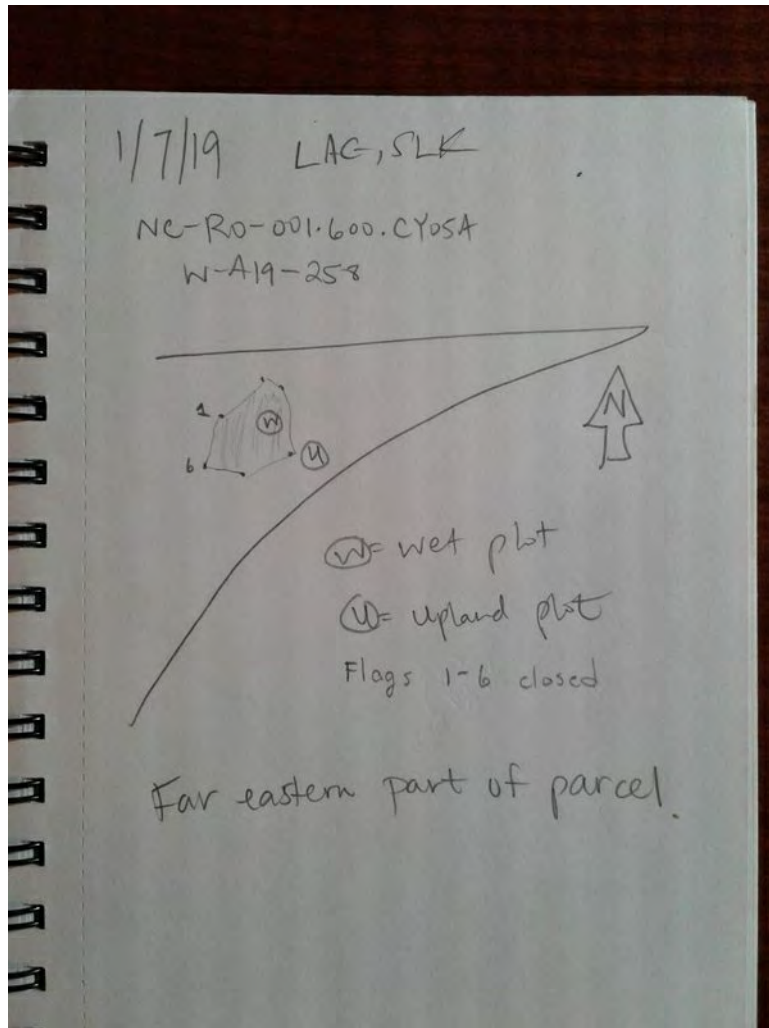
Photo of Sample Plot  
South



Photo of Sample Plot  
West



Photo of Sample Plot Sketch



**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: MVP Southgate City/County: Eden, Rockingham Co... Sampling Date: 2019-Jan-07  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-258\_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: 36.5138423 Long: -79.7180899 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:  Covertype is UPL. Area is upland, not all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>			<u>Secondary Indicators (minimum of two required)</u>				
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)					
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)					
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)					
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)					
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)					
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)					
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)					
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)					
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)					
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)					
		<input type="checkbox"/> FAC-Neutral Test (D5)					
<b>Field Observations:</b>			Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):				_____	
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):				_____	
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):				_____	
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-A19-258 UPL-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>																																								
1. <i>Juniperus virginiana</i>	5	Yes	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)																																								
2. <i>Prunus serotina</i>	5	Yes	FACU	Total Number of Dominant Species Across All Strata: <u>3</u> (B)																																								
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)																																								
4. _____																																												
5. _____																																												
6. _____																																												
7. _____																																												
<u>10</u> = Total Cover 50% of total cover: <u>5</u> 20% of total cover: <u>2</u>				<b>Prevalence Index worksheet:</b>																																								
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 20%; text-align: center;"><u>Total % Cover of:</u></th> <th style="width: 10%;"></th> <th style="width: 20%; text-align: center;"><u>Multiply By:</u></th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 1 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 2 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>5</u></td> <td></td> <td style="text-align: center;">x 3 =</td> <td style="text-align: center;"><u>15</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>55</u></td> <td></td> <td style="text-align: center;">x 4 =</td> <td style="text-align: center;"><u>220</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 5 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;"><u>60</u></td> <td style="text-align: center;">(A)</td> <td></td> <td style="text-align: center;"><u>235</u> (B)</td> </tr> <tr> <td colspan="4" style="text-align: right;">Prevalence Index = B/A =</td> <td style="text-align: center;"><u>3.9</u></td> </tr> </tbody> </table>		<u>Total % Cover of:</u>		<u>Multiply By:</u>		OBL species	<u>0</u>		x 1 =	<u>0</u>	FACW species	<u>0</u>		x 2 =	<u>0</u>	FAC species	<u>5</u>		x 3 =	<u>15</u>	FACU species	<u>55</u>		x 4 =	<u>220</u>	UPL species	<u>0</u>		x 5 =	<u>0</u>	Column Totals	<u>60</u>	(A)		<u>235</u> (B)	Prevalence Index = B/A =				<u>3.9</u>
	<u>Total % Cover of:</u>		<u>Multiply By:</u>																																									
OBL species	<u>0</u>		x 1 =	<u>0</u>																																								
FACW species	<u>0</u>		x 2 =	<u>0</u>																																								
FAC species	<u>5</u>		x 3 =	<u>15</u>																																								
FACU species	<u>55</u>		x 4 =	<u>220</u>																																								
UPL species	<u>0</u>		x 5 =	<u>0</u>																																								
Column Totals	<u>60</u>	(A)		<u>235</u> (B)																																								
Prevalence Index = B/A =				<u>3.9</u>																																								
1. _____				<b>Hydrophytic Vegetation Indicators:</b> ____ 1 - Rapid Test for Hydrophytic Vegetation ____ 2 - Dominance Test is > 50% ____ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup> ____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic																																								
2. _____																																												
3. _____																																												
4. _____																																												
5. _____																																												
6. _____																																												
7. _____																																												
8. _____																																												
9. _____																																												
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				<b>Definitions of Four Vegetation Strata:</b>																																								
<b>Herb Stratum</b> (Plot size: <u>5' radius</u> )				<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																																								
1. <i>Lonicera japonica</i>	35	Yes	FACU	<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																																								
2. <i>Rubus allegheniensis</i>	5	No	FACU																																									
3. <i>Juniperus virginiana</i>	5	No	FACU																																									
4. <i>Euthamia graminifolia</i>	5	No	FAC																																									
5. _____																																												
6. _____																																												
7. _____																																												
8. _____																																												
9. _____																																												
10. _____																																												
11. _____																																												
<u>50</u> = Total Cover 50% of total cover: <u>25</u> 20% of total cover: <u>10</u>																																												
<b>Woody Vine Stratum</b> (Plot size: <u>    </u> )																																												
1. _____																																												
2. _____																																												
3. _____																																												
4. _____																																												
5. _____																																												
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																												
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>  No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC– or drier).																																												

**SOIL**

Sampling Point: W-A19-258 UPL-1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 2	10YR 4/3	100					Silt Loam	
2 - 6	10YR 4/3	98	10YR 4/2	2	D	M	Silt Loam	

<sup>1</sup>Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup>Location: PL = Pore Lining, M = Matrix.

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

<b>Restrictive Layer (if observed):</b>		<b>Hydric Soil Present?</b>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Type:	<u>Compacted clay</u>		
Depth (inches):	<u>6</u>		

**Remarks:**

The criterion for hydric soil is not met. No field indicators of hydric soils within top 6".



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: Eden, Rockingham Co... Sampling Date: 2019-Jan-08  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-260\_PEM-1  
 Investigator(s): Laura Giese, Simon King Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Back slope Local relief (concave, convex, none): Concave Slope (%): 1 to 3  
 Subregion (LRR or MLRA): Lat: 36.5120353 Long: -79.7167437 Datum: WGS84  
 Soil Map Unit Name: Leaksville silt loam, 0 to 4 percent slopes NWI classification:  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:		
Covertypes is PEM.		

**HYDROLOGY**

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

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

Sampling Point: W-A19-260 PEM-1

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: _____	0 (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____	0 (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____	(A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>	
5. _____	_____	_____	_____	<u>Total % Cover of:</u>	<u>Multiply By:</u>
6. _____	_____	_____	_____	OBL species _____	x 1 = _____
7. _____	_____	_____	_____	FACW species _____	x 2 = _____
	0 = Total Cover			FAC species _____	x 3 = _____
	50% of total cover: <u>0</u>	20% of total cover: _____	<u>0</u>	FACU species _____	x 4 = _____
<b>Sapling/Shrub Stratum</b> (Plot size: _____)				UPL species _____	x 5 = _____
1. _____	_____	_____	_____	Column Totals _____	(A) _____ (B) _____
2. _____	_____	_____	_____	Prevalence Index = B/A = _____	
3. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b>	
4. _____	_____	_____	_____	____ 1 - Rapid Test for Hydrophytic Vegetation	
5. _____	_____	_____	_____	____ 2 - Dominance Test is > 50%	
6. _____	_____	_____	_____	____ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>	
7. _____	_____	_____	_____	____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
8. _____	_____	_____	_____	____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
9. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
	0 = Total Cover			<b>Definitions of Four Vegetation Strata:</b>	
	50% of total cover: <u>0</u>	20% of total cover: _____	<u>0</u>	<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
<b>Herb Stratum</b> (Plot size: _____)				<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
1. _____	_____	_____	_____	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
2. _____	_____	_____	_____	<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
3. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
	0 = Total Cover				
	50% of total cover: <u>0</u>	20% of total cover: _____	<u>0</u>		
<b>Woody Vine Stratum</b> (Plot size: _____)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
	0 = Total Cover				
	50% of total cover: <u>0</u>	20% of total cover: _____	<u>0</u>		
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>					
Juncus effusus, Carex sp. Schoenoplectus tabernaemontani, Arthraxon hispidus, Juncus tenuis, Festuca rubra , Setaria pumila.					

SOIL

Sampling Point: W-A19-260 PEM-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		

<sup>1</sup>Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup>Location: PL = Pore Lining, M = Matrix.

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

<p><b>Restrictive Layer (if observed):</b></p> Type: <u>None</u> Depth (inches): _____	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="checked" type="checkbox"/>
---	---

**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: Reidsville, Rockingham... Sampling Date: 2019-Jan-08  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-262\_PEM-1  
 Investigator(s): Laura Giese, Simon King Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0 to 1  
 Subregion (LRR or MLRA): Lat: 36.3357274 Long: -79.6546839 Datum: WGS84  
 Soil Map Unit Name: Clifford-Urban land complex, 2 to 10 percent slopes NWI classification:  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
<b>Remarks:</b>		
Covertypes is PEM. Area is wetland, all three wetland parameters are present. Created stormwater feature.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)	
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>2</u>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>0</u>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>0</u>
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>			
<b>Remarks:</b>			
The criterion for wetland hydrology is met.			

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

Sampling Point: W-A19-262 PEM-1

	Absolute % Cover	Dominant Species?	Indicator Status																									
<b>Tree Stratum (Plot size: <u>30</u>)</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;"></th> <th style="width: 25%; text-align: center;">Total % Cover of:</th> <th style="width: 25%; text-align: center;">Multiply By:</th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;"><u>5</u></td> <td style="text-align: center;">x 1 = <u>5</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>40</u></td> <td style="text-align: center;">x 2 = <u>80</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>0</u></td> <td style="text-align: center;">x 3 = <u>0</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>0</u></td> <td style="text-align: center;">x 4 = <u>0</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>15</u></td> <td style="text-align: center;">x 5 = <u>75</u></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;"><u>60</u></td> <td style="text-align: center;">(A) <u>160</u> (B)</td> </tr> <tr> <td colspan="3" style="text-align: center;">Prevalence Index = B/A = <u>2.7</u></td> </tr> </tbody> </table>		Total % Cover of:	Multiply By:	OBL species	<u>5</u>	x 1 = <u>5</u>	FACW species	<u>40</u>	x 2 = <u>80</u>	FAC species	<u>0</u>	x 3 = <u>0</u>	FACU species	<u>0</u>	x 4 = <u>0</u>	UPL species	<u>15</u>	x 5 = <u>75</u>	Column Totals	<u>60</u>	(A) <u>160</u> (B)	Prevalence Index = B/A = <u>2.7</u>		
	Total % Cover of:	Multiply By:																										
OBL species	<u>5</u>	x 1 = <u>5</u>																										
FACW species	<u>40</u>	x 2 = <u>80</u>																										
FAC species	<u>0</u>	x 3 = <u>0</u>																										
FACU species	<u>0</u>	x 4 = <u>0</u>																										
UPL species	<u>15</u>	x 5 = <u>75</u>																										
Column Totals	<u>60</u>	(A) <u>160</u> (B)																										
Prevalence Index = B/A = <u>2.7</u>																												
1. _____	_____	_____	_____																									
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
6. _____	_____	_____	_____																									
7. _____	_____	_____	_____																									
<u>0</u> = Total Cover																												
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																												
<b>Sapling/Shrub Stratum (Plot size: <u>15</u>)</b>																												
1. <i>Salix nigra</i>	5	Yes	OBL																									
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
6. _____	_____	_____	_____																									
7. _____	_____	_____	_____																									
8. _____	_____	_____	_____																									
9. _____	_____	_____	_____																									
<u>5</u> = Total Cover																												
50% of total cover: <u>2.5</u> 20% of total cover: <u>1</u>																												
<b>Herb Stratum (Plot size: <u>5' radius</u>)</b>																												
1. <i>Juncus effusus</i>	25	Yes	FACW																									
2. <i>Scirpus cyperinus</i>	15	Yes	FACW																									
3. <i>Pueraria montana</i>	15	Yes	UPL																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
6. _____	_____	_____	_____																									
7. _____	_____	_____	_____																									
8. _____	_____	_____	_____																									
9. _____	_____	_____	_____																									
10. _____	_____	_____	_____																									
11. _____	_____	_____	_____																									
<u>55</u> = Total Cover																												
50% of total cover: <u>27.5</u> 20% of total cover: <u>11</u>																												
<b>Woody Vine Stratum (Plot size: <u>    </u>)</b>																												
1. _____	_____	_____	_____																									
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
<u>0</u> = Total Cover																												
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																												
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>  A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).																												



SOIL

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 -								

<sup>1</sup>Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup>Location: PL = Pore Lining, M = Matrix.

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

<b>Restrictive Layer (if observed):</b>		<b>Hydric Soil Present?</b>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Type:	None		
Depth (inches):			

Remarks:

Soils were assumed to be hydric due to the presence of inundation, FACW and OBL vegetation species, and a definitive wetland boundary. Profile disturbed due to red-colored soils deposited from upslope and masking field indicators of hydric soils (See Photo).

Soil Photos



Photo of Sample Plot North



Photo of Sample Plot East



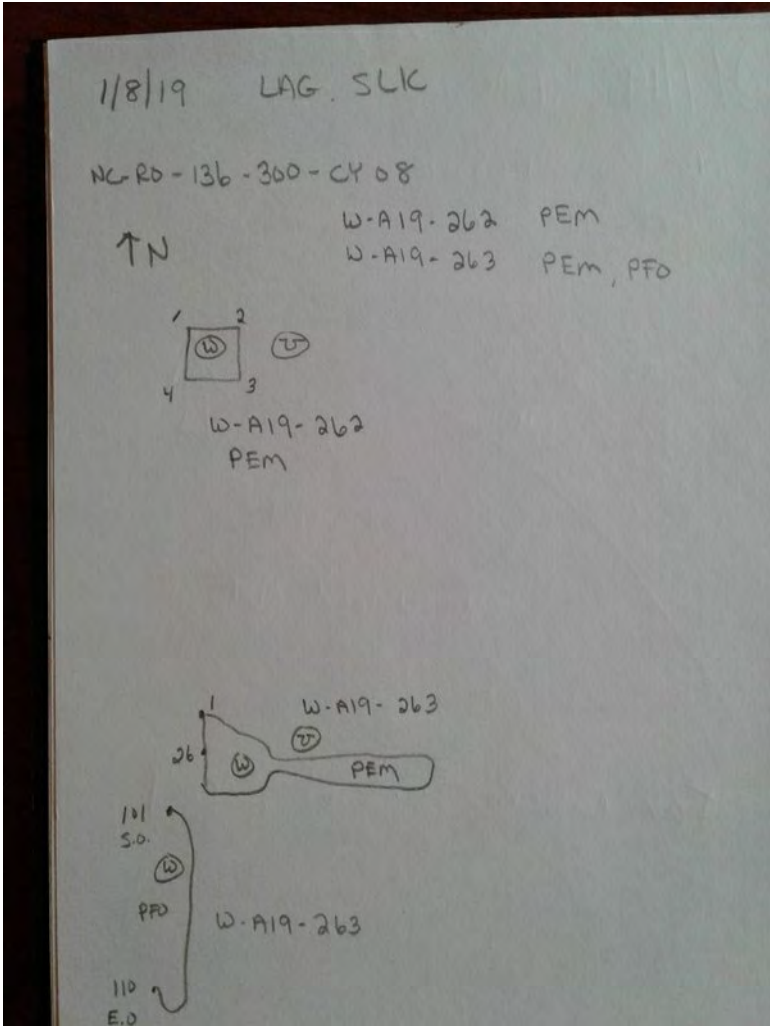
Photo of Sample Plot South



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: Reidsville, Rockingham... Sampling Date: 2019-Jan-08  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-262\_UPL-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: 36.3357471 Long: -79.6543882 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:		
Covertypes is UPL. Area is upland, not all three wetland parameters are present.		

**HYDROLOGY**

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

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

Sampling Point: W-A19-262\_UPL-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>		
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u>	(A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>1</u>	(B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u>	(A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>		
5. _____	_____	_____	_____	<b>Total % Cover of:</b>		<b>Multiply By:</b>
6. _____	_____	_____	_____	OBL species	<u>0</u>	x 1 = <u>0</u>
7. _____	_____	_____	_____	FACW species	<u>0</u>	x 2 = <u>0</u>
				FAC species	<u>0</u>	x 3 = <u>0</u>
				FACU species	<u>90</u>	x 4 = <u>360</u>
				UPL species	<u>0</u>	x 5 = <u>0</u>
				Column Totals	<u>90</u>	(A) <u>360</u> (B)
				Prevalence Index = B/A = <u>4</u>		
<u>0</u> = Total Cover						
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>						
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b>		
1. _____	_____	_____	_____	____ 1 - Rapid Test for Hydrophytic Vegetation		
2. _____	_____	_____	_____	____ 2 - Dominance Test is > 50%		
3. _____	_____	_____	_____	____ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>		
4. _____	_____	_____	_____	____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)		
5. _____	_____	_____	_____	____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)		
6. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		
7. _____	_____	_____	_____	<b>Definitions of Four Vegetation Strata:</b>		
8. _____	_____	_____	_____	<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
9. _____	_____	_____	_____	<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.		
10. _____	_____	_____	_____	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
11. _____	_____	_____	_____	<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.		
<u>0</u> = Total Cover						
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>						
<u>Herb Stratum</u> (Plot size: <u>5' radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status			
1. <i>Festuca rubra</i>	55	Yes	FACU			
2. <i>Ambrosia artemisiifolia</i>	15	No	FACU			
3. <i>Allium vineale</i>	15	No	FACU			
4. <i>Phytolacca americana</i>	5	No	FACU			
5. _____	_____	_____	_____			
6. _____	_____	_____	_____			
7. _____	_____	_____	_____			
8. _____	_____	_____	_____			
9. _____	_____	_____	_____			
10. _____	_____	_____	_____			
11. _____	_____	_____	_____			
<u>90</u> = Total Cover						
50% of total cover: <u>45</u> 20% of total cover: <u>18</u>						
<u>Woody Vine Stratum</u> (Plot size: <u>    </u> )	Absolute % Cover	Dominant Species?	Indicator Status			
1. _____	_____	_____	_____			
2. _____	_____	_____	_____			
3. _____	_____	_____	_____			
4. _____	_____	_____	_____			
5. _____	_____	_____	_____			
<u>0</u> = Total Cover						
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>						
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>  Fallow field. No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).						
				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		

SOIL

Sampling Point: W-A19-262\_UPL-1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 3	2.5YR 4/3	100					Silt Loam	micah
3 - 16	5YR 4/3	70					Silt Loam	
3 - 16	2.5YR 4/6	30					Loam	
16 - 20	2.5YR 4/6	70					Loam	
16 - 20	2.5YR 4/3	30						micah

<sup>1</sup>Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup>Location: PL = Pore Lining, M = Matrix.

Hydric Soil Indicators:

- 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<sup>3</sup>:

- 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)

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

Restrictive Layer (if observed):

Type: None  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

The criterion for hydric soil is not 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: Reidsville, Rockingham... Sampling Date: 2019-Jan-08  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-263\_PEM-1  
 Investigator(s): Laura Giese, Simon King Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0 to 1  
 Subregion (LRR or MLRA): Lat: 36.3341971 Long: -79.6547326 Datum: WGS84  
 Soil Map Unit Name: Clifford-Urban land complex, 2 to 10 percent slopes NWI classification:  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<b>Remarks:</b>			
Covertypes is PEM. Area is wetland, all three wetland parameters are present. Created stormwater feature .			

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)	
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>1</u>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>0</u>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>0</u>
(includes capillary fringe)		<b>Wetland Hydrology Present?</b>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>			
<b>Remarks:</b>  The criterion for wetland hydrology is met.			

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

Sampling Point: W-A19-263 PEM-1

	Absolute % Cover	Dominant Species?	Indicator Status																																									
<b>Tree Stratum (Plot size: <u>30</u>)</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 20%; text-align: center;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 20%; text-align: center;">Multiply By:</th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;"><u>15</u></td> <td></td> <td style="text-align: center;">x 1 =</td> <td style="text-align: center;"><u>15</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>55</u></td> <td></td> <td style="text-align: center;">x 2 =</td> <td style="text-align: center;"><u>110</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>30</u></td> <td></td> <td style="text-align: center;">x 3 =</td> <td style="text-align: center;"><u>90</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 4 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 5 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;"><u>100</u></td> <td style="text-align: center;">(A)</td> <td></td> <td style="text-align: center;"><u>215</u> (B)</td> </tr> <tr> <td colspan="4" style="text-align: right;">Prevalence Index = B/A =</td> <td style="text-align: center;"><u>2.2</u></td> </tr> </tbody> </table>		Total % Cover of:		Multiply By:		OBL species	<u>15</u>		x 1 =	<u>15</u>	FACW species	<u>55</u>		x 2 =	<u>110</u>	FAC species	<u>30</u>		x 3 =	<u>90</u>	FACU species	<u>0</u>		x 4 =	<u>0</u>	UPL species	<u>0</u>		x 5 =	<u>0</u>	Column Totals	<u>100</u>	(A)		<u>215</u> (B)	Prevalence Index = B/A =				<u>2.2</u>
	Total % Cover of:		Multiply By:																																									
OBL species	<u>15</u>		x 1 =		<u>15</u>																																							
FACW species	<u>55</u>		x 2 =		<u>110</u>																																							
FAC species	<u>30</u>		x 3 =		<u>90</u>																																							
FACU species	<u>0</u>		x 4 =		<u>0</u>																																							
UPL species	<u>0</u>		x 5 =		<u>0</u>																																							
Column Totals	<u>100</u>	(A)			<u>215</u> (B)																																							
Prevalence Index = B/A =					<u>2.2</u>																																							
1. _____	_____	_____	_____																																									
2. _____	_____	_____	_____																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
5. _____	_____	_____	_____																																									
6. _____	_____	_____	_____																																									
7. _____	_____	_____	_____																																									
<u>0</u> = Total Cover																																												
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																												
<b>Sapling/Shrub Stratum (Plot size: <u>15</u>)</b>																																												
1. _____	_____	_____	_____																																									
2. _____	_____	_____	_____																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
5. _____	_____	_____	_____																																									
6. _____	_____	_____	_____																																									
7. _____	_____	_____	_____																																									
8. _____	_____	_____	_____																																									
9. _____	_____	_____	_____																																									
<u>0</u> = Total Cover																																												
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																												
<b>Herb Stratum (Plot size: <u>5' radius</u>)</b>																																												
1. <u>Juncus tenuis</u>	<u>25</u>	Yes	FAC																																									
2. <u>Juncus effusus</u>	<u>20</u>	Yes	FACW																																									
3. <u>Typha X glauca</u>	<u>15</u>	Yes	OBL																																									
4. <u>Scirpus cyperinus</u>	<u>15</u>	Yes	FACW																																									
5. <u>Salix interior</u>	<u>15</u>	Yes	FACW																																									
6. <u>Ludwigia alternifolia</u>	<u>5</u>	No	FACW																																									
7. <u>Vernonia fasciculata</u>	<u>5</u>	No	FAC																																									
8. _____	_____	_____	_____																																									
9. _____	_____	_____	_____																																									
10. _____	_____	_____	_____																																									
11. _____	_____	_____	_____																																									
<u>100</u> = Total Cover																																												
50% of total cover: <u>50</u> 20% of total cover: <u>20</u>																																												
<b>Woody Vine Stratum (Plot size: <u>    </u>)</b>																																												
1. _____	_____	_____	_____																																									
2. _____	_____	_____	_____																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
5. _____	_____	_____	_____																																									
<u>0</u> = Total Cover																																												
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																												
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>																																												
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). Row of Salix nigra on west end of wetland.																																												
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																																												

SOIL

Sampling Point: W-A19-263 PEM-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 2	10YR 4/3	100					Silt Loam	
2 - 13	N 5/	95	10YR 5/8	5			Sandy Clay Loam	
13 - 20	10B 6/1	90	10YR 5/8	10	C	M	Sandy Clay	
<sup>1</sup> Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup> Location: PL = Pore Lining, M = Matrix.								
Hydric Soil Indicators:						Indicators for Problematic Hydric Soils <sup>3</sup> :		
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Dark Surface (S7)			<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148)			<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)			<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input checked="" type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> Stratified Layers (A5)			<input checked="" type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> 2 cm Muck (A10) (LRR N)			<input type="checkbox"/> Redox Dark Surface (F6)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)			<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)					
<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148)					
<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)					
Restrictive Layer (if observed):								
Type:	None							
Depth (inches):								
Remarks:								

Photo of Sample Plot North



Photo of Sample Plot East



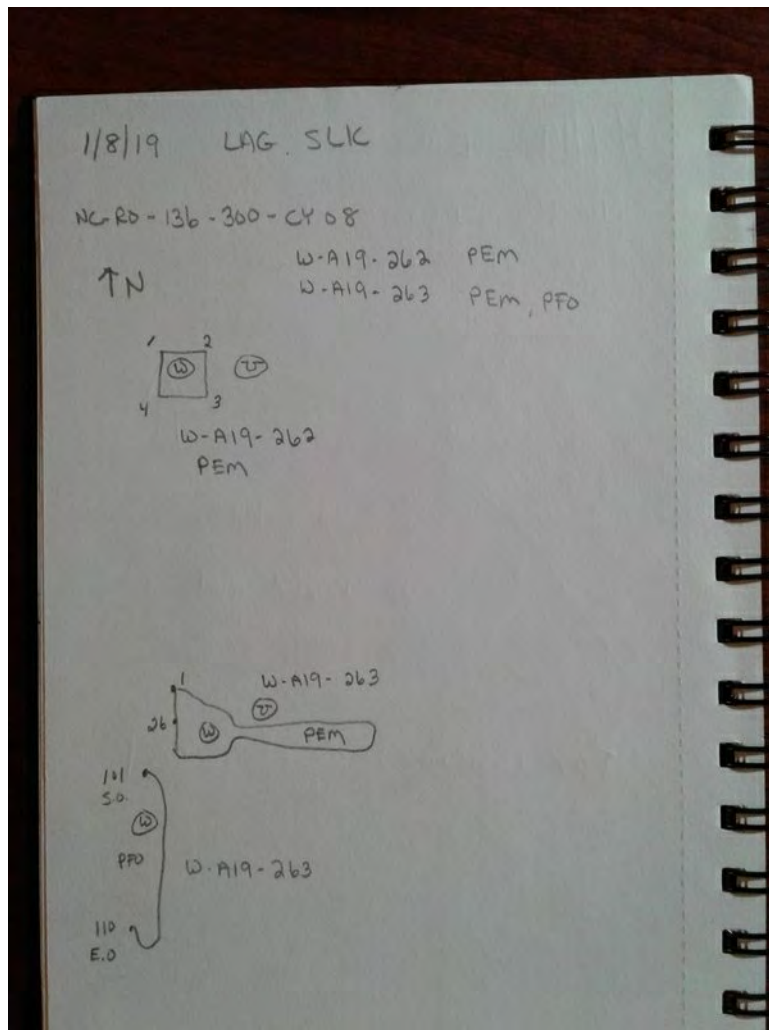
Photo of Sample Plot South



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: Reidsville, Rockingham... Sampling Date: 2019-Jan-08  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-263\_PFO-1  
 Investigator(s): Laura Giese, Simon King Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Toe Local relief (concave, convex, none): Concave Slope (%): 1 to 3  
 Subregion (LRR or MLRA): Lat: 36.3338244 Long: -79.6552068 Datum: WGS84  
 Soil Map Unit Name: Clifford-Urban land complex, 2 to 10 percent slopes NWI classification:  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:  Covertypes is PFO. Area is wetland, all three wetland parameters are present. Red colored soils.		

**HYDROLOGY**

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



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

Sampling Point: W-A19-263 PFO-1

	Absolute % Cover	Dominant Species?	Indicator Status																																	
<b>Tree Stratum (Plot size: <u>30</u>)</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 20%; text-align: center;">Total % Cover of:</th> <th style="width: 20%;"></th> <th style="width: 20%; text-align: center;">Multiply By:</th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;"><u>0</u></td> <td>x 1 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>5</u></td> <td>x 2 =</td> <td style="text-align: center;"><u>10</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>70</u></td> <td>x 3 =</td> <td style="text-align: center;"><u>210</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>10</u></td> <td>x 4 =</td> <td style="text-align: center;"><u>40</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td>x 5 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;"><u>85</u></td> <td>(A)</td> <td style="text-align: center;"><u>260</u> (B)</td> </tr> <tr> <td colspan="4" style="text-align: right;">Prevalence Index = B/A = <u>3.1</u></td> </tr> </tbody> </table>		Total % Cover of:		Multiply By:	OBL species	<u>0</u>	x 1 =	<u>0</u>	FACW species	<u>5</u>	x 2 =	<u>10</u>	FAC species	<u>70</u>	x 3 =	<u>210</u>	FACU species	<u>10</u>	x 4 =	<u>40</u>	UPL species	<u>0</u>	x 5 =	<u>0</u>	Column Totals	<u>85</u>	(A)	<u>260</u> (B)	Prevalence Index = B/A = <u>3.1</u>			
	Total % Cover of:		Multiply By:																																	
OBL species	<u>0</u>	x 1 =	<u>0</u>																																	
FACW species	<u>5</u>	x 2 =	<u>10</u>																																	
FAC species	<u>70</u>	x 3 =	<u>210</u>																																	
FACU species	<u>10</u>	x 4 =	<u>40</u>																																	
UPL species	<u>0</u>	x 5 =	<u>0</u>																																	
Column Totals	<u>85</u>	(A)	<u>260</u> (B)																																	
Prevalence Index = B/A = <u>3.1</u>																																				
1. <i>Liquidambar styraciflua</i>	30	Yes	FAC																																	
2. <i>Fraxinus pennsylvanica</i>	5	No	FACW																																	
3. <i>Quercus phellos</i>	5	No	FAC																																	
4. _____																																				
5. _____																																				
6. _____																																				
7. _____																																				
<u>40</u> = Total Cover																																				
50% of total cover: <u>20</u>		20% of total cover: <u>8</u>																																		
<b>Sapling/Shrub Stratum (Plot size: <u>15</u>)</b>																																				
1. <i>Malus sp.</i>	10	Yes	NI																																	
2. <i>Quercus phellos</i>	10	Yes	FAC																																	
3. _____																																				
4. _____																																				
5. _____																																				
6. _____																																				
7. _____																																				
8. _____																																				
9. _____																																				
<u>20</u> = Total Cover																																				
50% of total cover: <u>10</u>		20% of total cover: <u>4</u>																																		
<b>Herb Stratum (Plot size: <u>5' radius</u>)</b>																																				
1. <i>Toxicodendron radicans</i>	25	Yes	FAC																																	
2. <i>Lonicera japonica</i>	10	Yes	FACU																																	
3. _____																																				
4. _____																																				
5. _____																																				
6. _____																																				
7. _____																																				
8. _____																																				
9. _____																																				
10. _____																																				
11. _____																																				
<u>35</u> = Total Cover																																				
50% of total cover: <u>17.5</u>		20% of total cover: <u>7</u>																																		
<b>Woody Vine Stratum (Plot size: <u>    </u>)</b>																																				
1. _____																																				
2. _____																																				
3. _____																																				
4. _____																																				
5. _____																																				
<u>0</u> = Total Cover																																				
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>																																		
<b>Hydrophytic Vegetation Indicators:</b> ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup> ___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic																																				
<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																																				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																																				
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>  A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).																																				



Photo of Sample Plot  
North



Photo of Sample Plot  
East



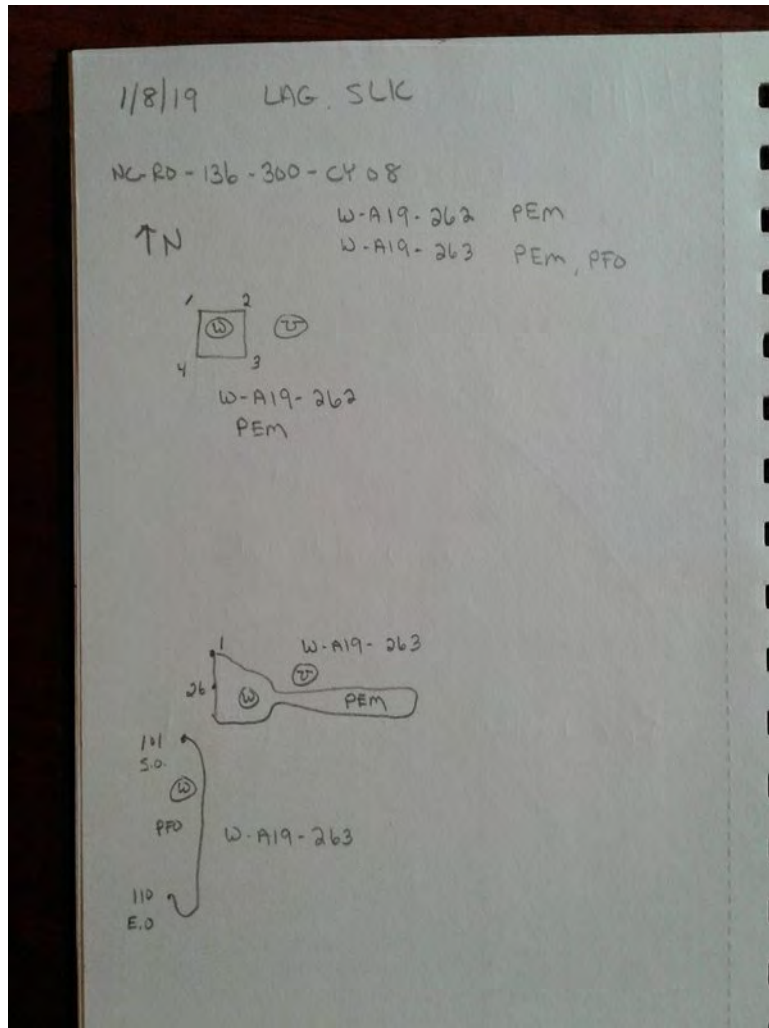
Photo of Sample Plot  
South



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: Reidsville, Rockingham... Sampling Date: 2019-Jan-08  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-263\_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: 36.3340377 Long: -79.6544051 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:		
Covertypes is UPL. Area is upland, not all three wetland parameters are present.		

**HYDROLOGY**

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

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

Sampling Point: W-A19-263 UPL-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>	
5. _____	_____	_____	_____	<b>Total % Cover of:</b>	<b>Multiply By:</b>
6. _____	_____	_____	_____	OBL species	<u>0</u> x 1 = <u>0</u>
7. _____	_____	_____	_____	FACW species	<u>0</u> x 2 = <u>0</u>
	<u>0</u> = Total Cover			FAC species	<u>0</u> x 3 = <u>0</u>
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>		FACU species	<u>75</u> x 4 = <u>300</u>
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				UPL species	<u>0</u> x 5 = <u>0</u>
1. _____	_____	_____	_____	Column Totals	<u>75</u> (A) <u>300</u> (B)
2. _____	_____	_____	_____	Prevalence Index = B/A = <u>4</u>	
3. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b>	
4. _____	_____	_____	_____	____ 1 - Rapid Test for Hydrophytic Vegetation	
5. _____	_____	_____	_____	____ 2 - Dominance Test is > 50%	
6. _____	_____	_____	_____	____ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>	
7. _____	_____	_____	_____	____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
8. _____	_____	_____	_____	____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
9. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
	<u>0</u> = Total Cover			<b>Definitions of Four Vegetation Strata:</b>	
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>		<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
<b>Herb Stratum</b> (Plot size: <u>5' radius</u> )				<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
1. <u>Lespedeza cuneata</u>	<u>55</u>	<u>Yes</u>	<u>FACU</u>	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
2. <u>Rubus allegheniensis</u>	<u>10</u>	<u>No</u>	<u>FACU</u>	<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
3. <u>Allium vineale</u>	<u>10</u>	<u>No</u>	<u>FACU</u>	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
4. <u>Asteraceae</u>	<u>10</u>	<u>No</u>	<u>NI</u>		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
	<u>85</u> = Total Cover				
	50% of total cover: <u>42.5</u>	20% of total cover: <u>17</u>			
<b>Woody Vine Stratum</b> (Plot size: <u>    </u> )					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
	<u>0</u> = Total Cover				
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>			
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>					
Fallow field. No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).					

**SOIL**

Sampling Point: W-A19-263\_UPL-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 16	5YR 4/3	80					Sandy Clay	
0 - 16	5YR 4/6	20					Sandy Clay	

<sup>1</sup>Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup>Location: PL = Pore Lining, M = Matrix.

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

<b>Restrictive Layer (if observed):</b>		<b>Hydric Soil Present?</b>	<b>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></b>
Type: _____	None _____		
Depth (inches): _____	_____		

**Remarks:**

The criterion for hydric soil is not met. mixed several minor colors.



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: McLeansville, Guilford... Sampling Date: 2019-Jan-09  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-265\_PFO-1  
 Investigator(s): Laura Giese, Simon King, Jim Bolduc Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Back slope Local relief (concave, convex, none): Undulating Slope (%): 2 to 5  
 Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.1087294 Long: -79.6569703 Datum: WGS84  
 Soil Map Unit Name: Helena-Sedgefield complex, 0 to 6 percent slopes NWI classification:  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:		
Covertypes is PFO. Area is wetland, all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>6</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>0</u>	
(includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		
The criterion for wetland hydrology is met. Soil is episaturated. saturated from 0-6 inches. Saturation may not be present in summer..		

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

Sampling Point: W-A19-265\_PFO-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. <i>Pinus taeda</i>	30	Yes	FAC	Number of Dominant Species That Are OBL, FACW, or FAC:	3 (A)
2. <i>Ulmus rubra</i>	20	Yes	FAC	Total Number of Dominant Species Across All Strata:	5 (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC:	60 (A/B)
4. _____				<b>Prevalence Index worksheet:</b>	
5. _____				<u>Total % Cover of:</u>	<u>Multiply By:</u>
6. _____				OBL species	0 x 1 = 0
7. _____				FACW species	0 x 2 = 0
	50 = Total Cover			FAC species	80 x 3 = 240
	50% of total cover: <u>25</u>	20% of total cover: <u>10</u>		FACU species	30 x 4 = 120
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				UPL species	0 x 5 = 0
1. <i>Liquidambar styraciflua</i>	30	Yes	FAC	Column Totals	110 (A) 360 (B)
2. <i>Acer saccharum</i>	25	Yes	FACU	Prevalence Index = B/A = <u>3.3</u>	
3. _____				<b>Hydrophytic Vegetation Indicators:</b>	
4. _____				____ 1 - Rapid Test for Hydrophytic Vegetation	
5. _____				<input checked="" type="checkbox"/> 2 - Dominance Test is >50%	
6. _____				____ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>	
7. _____				____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
8. _____				____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
9. _____				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
	55 = Total Cover			<b>Definitions of Four Vegetation Strata:</b>	
	50% of total cover: <u>27.5</u>	20% of total cover: <u>11</u>		<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
<b>Herb Stratum</b> (Plot size: <u>5' radius</u> )				<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
1. <i>Lonicera japonica</i>	5	Yes	FACU	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
2. _____				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
3. _____				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
4. _____					
5. _____					
6. _____					
7. _____					
	5 = Total Cover				
	50% of total cover: <u>2.5</u>	20% of total cover: <u>1</u>			
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> )					
1. _____					
2. _____					
3. _____					
4. _____					
5. _____					
	0 = Total Cover				
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>			
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>					
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).					

SOIL

Sampling Point: W-A19-265\_PFO-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 2	10YR 3/2	100					Sandy Loam	
2 - 6	10YR 4/2	100					Loamy Sand	
6 - 12	2.5Y 5/1	90	10YR 5/8	10	C	M	Sandy Clay	
12 - 20	2.5Y 6/1	80	10YR 5/8	20	C	M	Sandy Clay	
<sup>1</sup> Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup> Location: PL = Pore Lining, M = Matrix.								
<b>Hydric Soil Indicators:</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) (LRR N) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input checked="" type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136) <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)		
<b>Restrictive Layer (if observed):</b> Type: <u>Clay</u> Depth (inches): <u>6</u>			<b>Hydric Soil Present?</b>			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b>          The criterion for hydric soil is met.								

Photo of Sample Plot  
North



Photo of Sample Plot  
East



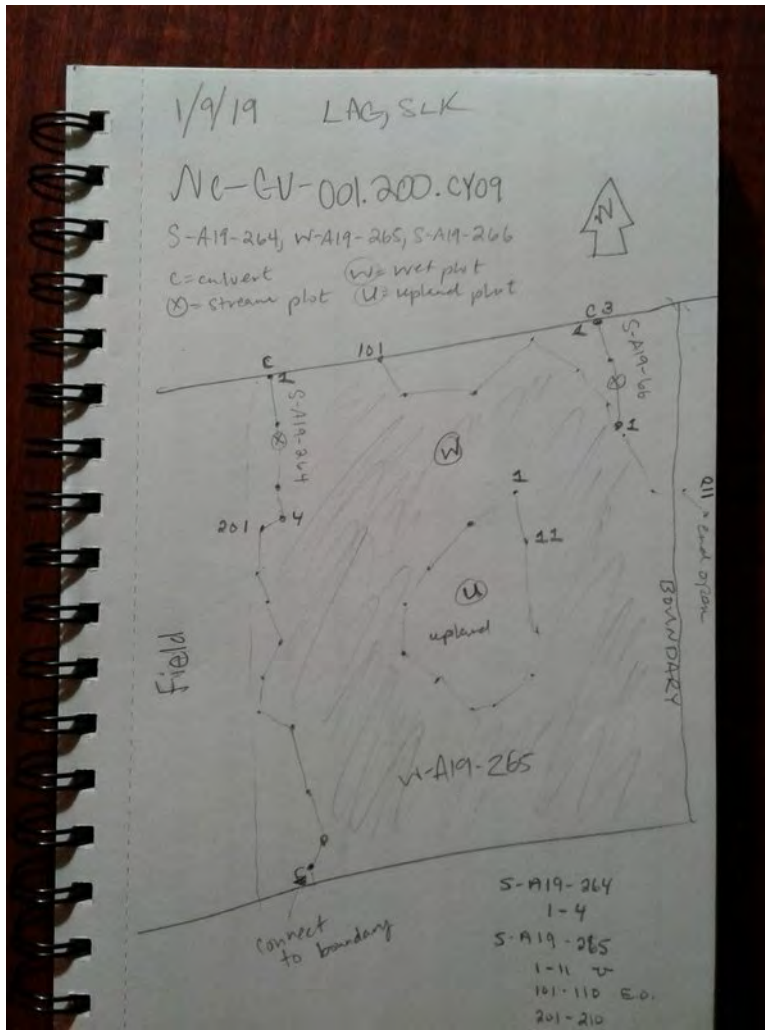
Photo of Sample Plot  
South



Photo of Sample Plot  
West



Photo of Sample Plot Sketch





**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: MVP Southgate City/County: McLeansville, Guilford... Sampling Date: 2019-Jan-09  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-265\_UPL-1  
 Investigator(s): Laura Giese, Simon King Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Back slope Local relief (concave, convex, none): Undulating Slope (%): 2 to 5  
 Subregion (LRR or MLRA): Lat: 36.1078602 Long: -79.6559117 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:  Covertype is UPL. Area is upland, not all three wetland parameters are present.		

**HYDROLOGY**

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

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

Sampling Point: W-A19-265 UPL-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. <i>Pinus taeda</i>	30	Yes	FAC	Number of Dominant Species That Are OBL, FACW, or FAC:	4 (A)
2. <i>Liquidambar styraciflua</i>	20	Yes	FAC	Total Number of Dominant Species Across All Strata:	6 (B)
3. <i>Acer saccharum</i>	5	No	FACU	Percent of Dominant Species That Are OBL, FACW, or FAC:	66.7 (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>	
5. _____	_____	_____	_____	<b>Total % Cover of:</b>	<b>Multiply By:</b>
6. _____	_____	_____	_____	OBL species	0 x 1 = 0
7. _____	_____	_____	_____	FACW species	0 x 2 = 0
	55 = Total Cover			FAC species	70 x 3 = 210
	50% of total cover: <u>27.5</u>	20% of total cover: <u>11</u>		FACU species	20 x 4 = 80
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				UPL species	0 x 5 = 0
1. <i>Acer saccharum</i>	10	Yes	FACU	Column Totals	90 (A) 290 (B)
2. <i>Liquidambar styraciflua</i>	10	Yes	FAC	Prevalence Index = B/A = <u>3.2</u>	
3. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b>	
4. _____	_____	_____	_____	____ 1 - Rapid Test for Hydrophytic Vegetation	
5. _____	_____	_____	_____	✓ 2 - Dominance Test is >50%	
6. _____	_____	_____	_____	____ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>	
7. _____	_____	_____	_____	____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
8. _____	_____	_____	_____	____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
9. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
	20 = Total Cover			<b>Definitions of Four Vegetation Strata:</b>	
	50% of total cover: <u>10</u>	20% of total cover: <u>4</u>		<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
<b>Herb Stratum</b> (Plot size: <u>5' radius</u> )				<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
1. <i>Lonicera japonica</i>	5	Yes	FACU	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
2. _____	_____	_____	_____	<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
3. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
	5 = Total Cover				
	50% of total cover: <u>2.5</u>	20% of total cover: <u>1</u>			
<b>Woody Vine Stratum</b> (Plot size: <u>30</u> )					
1. <i>Smilax rotundifolia</i>	10	Yes	FAC		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
	10 = Total Cover				
	50% of total cover: <u>5</u>	20% of total cover: <u>2</u>			
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>					
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).					

SOIL

Sampling Point: W-A19-265\_UPL-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 2	10YR 3/2	100					Sandy Loam	
2 - 10	10YR 4/2	100					Sandy Loam	
	10YR 6/1	80	10YR 5/8	20	C	M	Clay	
<sup>1</sup> Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup> Location: PL = Pore Lining, M = Matrix.								
<b>Hydric Soil Indicators:</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) (LRR N) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136) <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)		
<b>Restrictive Layer (if observed):</b> Type: <u>Clay</u> Depth (inches): <u>10</u>			<b>Hydric Soil Present?</b>			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b>          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



**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: MVP Southgate City/County: Reidsville, Rockingham... Sampling Date: 2019-Jan-10  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-268\_PEM-1  
 Investigator(s): Laura Giese, Simon King 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: 36.4335878 Long: -79.670946 Datum: WGS84  
 Soil Map Unit Name: Rhodhiss sandy loam, 15 to 30 percent slopes NWI classification:  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:  Covertypes is PEM. Area is wetland, all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>			<u>Secondary Indicators (minimum of two required)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)			
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)			
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)			
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)			
		<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>					
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):			
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<b>10</b>		
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<b>10</b>		
(includes capillary fringe)			Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:  The criterion for wetland hydrology is met.					

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

Sampling Point: W-A19-268 PEM-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator	Status	<b>Dominance Test worksheet:</b>	
1. _____	_____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	1 (A)
2. _____	_____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	3 (B)
3. _____	_____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	33.3 (A/B)
4. _____	_____	_____	_____	_____	<b>Prevalence Index worksheet:</b>	
5. _____	_____	_____	_____	_____	<b>Total % Cover of:</b>	<b>Multiply By:</b>
6. _____	_____	_____	_____	_____	OBL species	0 x 1 = 0
7. _____	_____	_____	_____	_____	FACW species	2 x 2 = 4
0 = Total Cover					FAC species	0 x 3 = 0
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>					FACU species	4 x 4 = 16
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )					UPL species	0 x 5 = 0
1. _____	_____	_____	_____	_____	Column Totals	6 (A) 20 (B)
2. _____	_____	_____	_____	_____	Prevalence Index = B/A = <u>3.3</u>	
3. _____	_____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b>	
4. _____	_____	_____	_____	_____	___ 1 - Rapid Test for Hydrophytic Vegetation	
5. _____	_____	_____	_____	_____	___ 2 - Dominance Test is > 50%	
6. _____	_____	_____	_____	_____	___ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>	
7. _____	_____	_____	_____	_____	___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
8. _____	_____	_____	_____	_____	<input checked="" type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
9. _____	_____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
0 = Total Cover					<b>Definitions of Four Vegetation Strata:</b>	
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>					<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
<b>Herb Stratum</b> (Plot size: <u>5</u> )					<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
1. <i>Polystichum acrostichoides</i>	2	Yes	FACU	_____	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
2. <i>Allium vineale</i>	2	Yes	FACU	_____	<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
3. <i>Juncus effusus</i>	2	Yes	FACW	_____	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
4. _____	_____	_____	_____	_____		
5. _____	_____	_____	_____	_____		
6. _____	_____	_____	_____	_____		
7. _____	_____	_____	_____	_____		
8. _____	_____	_____	_____	_____		
9. _____	_____	_____	_____	_____		
10. _____	_____	_____	_____	_____		
11. _____	_____	_____	_____	_____		
6 = Total Cover						
50% of total cover: <u>3</u> 20% of total cover: <u>1.2000000000000002</u>						
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> )						
1. _____	_____	_____	_____	_____		
2. _____	_____	_____	_____	_____		
3. _____	_____	_____	_____	_____		
4. _____	_____	_____	_____	_____		
5. _____	_____	_____	_____	_____		
0 = Total Cover						
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>						
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>						
A positive indication of hydrophytic vegetation was observed (Problematic Hydrophytic Vegetation).						





Photo of Sample Plot  
North



Photo of Sample Plot  
East



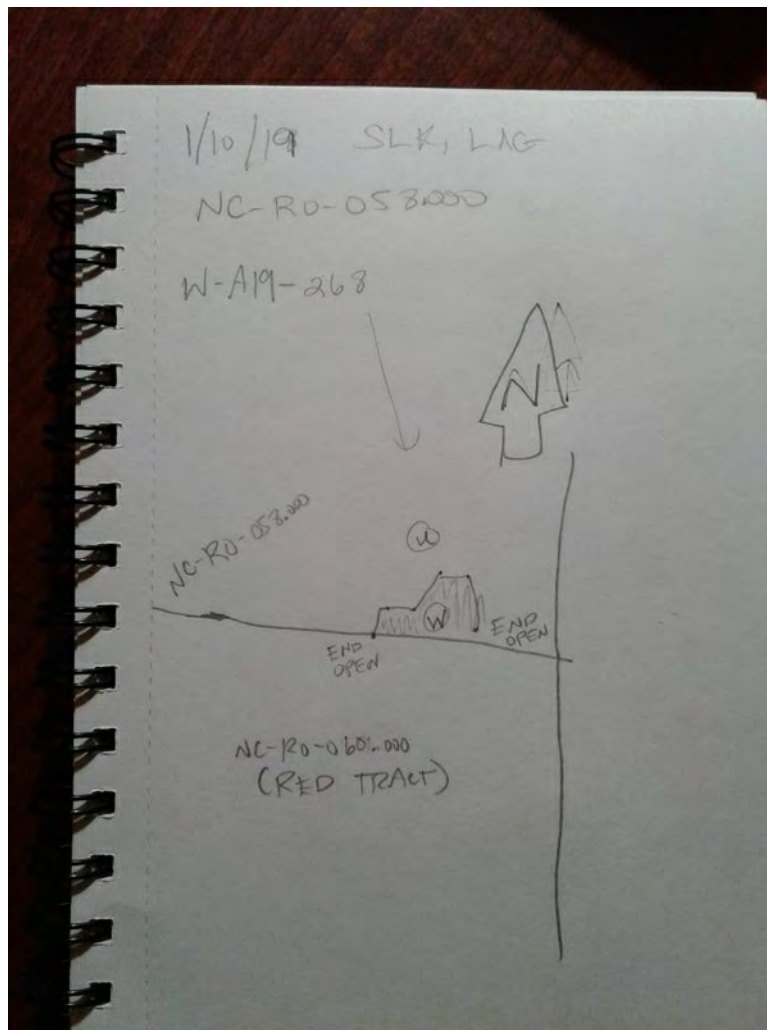
Photo of Sample Plot  
South



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: Reidsville, Rockingham... Sampling Date: 2019-Jan-10  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-268\_UPL-1  
 Investigator(s): Laura Giese, Simon King 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: 36.4333055 Long: -79.6709337 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:		
Covertypes is UPL. Area is upland, not all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (includes capillary fringe)	Depth (inches): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		
The criterion for wetland hydrology is not met. No positive indication of wetland hydrology was observed.		

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

Sampling Point: W-A19-268 UPL-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status																																	
1. <i>Liriodendron tulipifera</i>	20	Yes	FACU	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>16.7</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 20%; text-align: center;"><u>Total % Cover of:</u></th> <th style="width: 20%;"></th> <th style="width: 20%; text-align: center;"><u>Multiply By:</u></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;"><u>0</u></td> <td style="text-align: center;">x 1 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>0</u></td> <td style="text-align: center;">x 2 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>15</u></td> <td style="text-align: center;">x 3 =</td> <td style="text-align: center;"><u>45</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>70</u></td> <td style="text-align: center;">x 4 =</td> <td style="text-align: center;"><u>280</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td style="text-align: center;">x 5 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;"><u>85</u></td> <td style="text-align: center;">(A)</td> <td style="text-align: center;"><u>325</u> (B)</td> </tr> <tr> <td colspan="4" style="text-align: right;">Prevalence Index = B/A = <u>3.8</u></td> </tr> </tbody> </table>		<u>Total % Cover of:</u>		<u>Multiply By:</u>	OBL species	<u>0</u>	x 1 =	<u>0</u>	FACW species	<u>0</u>	x 2 =	<u>0</u>	FAC species	<u>15</u>	x 3 =	<u>45</u>	FACU species	<u>70</u>	x 4 =	<u>280</u>	UPL species	<u>0</u>	x 5 =	<u>0</u>	Column Totals	<u>85</u>	(A)	<u>325</u> (B)	Prevalence Index = B/A = <u>3.8</u>			
	<u>Total % Cover of:</u>		<u>Multiply By:</u>																																	
OBL species	<u>0</u>	x 1 =	<u>0</u>																																	
FACW species	<u>0</u>	x 2 =	<u>0</u>																																	
FAC species	<u>15</u>	x 3 =	<u>45</u>																																	
FACU species	<u>70</u>	x 4 =	<u>280</u>																																	
UPL species	<u>0</u>	x 5 =	<u>0</u>																																	
Column Totals	<u>85</u>	(A)	<u>325</u> (B)																																	
Prevalence Index = B/A = <u>3.8</u>																																				
2. <i>Magnolia acuminata</i>	10	Yes	FACU																																	
3. <i>Diospyros virginiana</i>	5	No	FAC																																	
4. _____																																				
5. _____																																				
6. _____																																				
7. _____																																				
_____ = Total Cover																																				
50% of total cover: <u>17.5</u>		20% of total cover: <u>7</u>																																		
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																																				
1. _____				<b>Hydrophytic Vegetation Indicators:</b> ____ 1 - Rapid Test for Hydrophytic Vegetation ____ 2 - Dominance Test is > 50% ____ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup> ____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic  <b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.   Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																																
2. _____																																				
3. _____																																				
4. _____																																				
5. _____																																				
6. _____																																				
7. _____																																				
8. _____																																				
9. _____																																				
_____ = Total Cover																																				
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>																																		
<b>Herb Stratum</b> (Plot size: <u>5</u> )																																				
1. <i>Lonicera japonica</i>	20	Yes	FACU																																	
2. <i>Polystichum acrostichoides</i>	10	Yes	FACU																																	
3. <i>Allium vineale</i>	10	Yes	FACU																																	
4. _____																																				
5. _____																																				
6. _____																																				
7. _____																																				
8. _____																																				
9. _____																																				
10. _____																																				
11. _____																																				
_____ = Total Cover																																				
50% of total cover: <u>20</u>		20% of total cover: <u>8</u>																																		
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> )																																				
1. <i>Smilax rotundifolia</i>	10	Yes	FAC																																	
2. _____																																				
3. _____																																				
4. _____																																				
5. _____																																				
_____ = Total Cover																																				
50% of total cover: <u>5</u>		20% of total cover: <u>2</u>																																		
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>   No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC– or drier).																																				

SOIL

Sampling Point: W-A19-268 UPL-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 2	7.5YR 4/4	100					Silt Loam	
2 - 16	5YR 4/6	95	7.5YR 4/3	5	D	M	Silty Clay Loam	
16 - 20	5YR 5/8	95	7.5YR 4/2	5	D	M	Sandy Loam	

<sup>1</sup>Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup>Location: PL = Pore Lining, M = Matrix.

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

<b>Restrictive Layer (if observed):</b>		<b>Hydric Soil Present?</b>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Type:	None		
Depth (inches):			

**Remarks:**

No positive indication of hydric soils was observed. The criterion for hydric soil is not 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: Reidsville, Rockingham... Sampling Date: 2019-Jan-11  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-270\_PFO-1  
 Investigator(s): Laura Giese, Simon King Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Foot slope Local relief (concave, convex, none): Concave Slope (%): 1 to 3  
 Subregion (LRR or MLRA): Lat: 36.4070258 Long: -79.6468279 Datum: WGS84  
 Soil Map Unit Name: Codorus loam, 0 to 2 percent slopes, frequently flooded NWI classification:  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:  Covertypes is PFO. Area is wetland, all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)  <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>15</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>13</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  	
Remarks:  The criterion for wetland hydrology is met. water rose to 9 inches in borehole.	

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

Sampling Point: W-A19-270 PFO-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. <i>Betula nigra</i>	40	Yes	FACW	Number of Dominant Species That Are OBL, FACW, or FAC:	3 (A)
2. <i>Liquidambar styraciflua</i>	5	No	FAC	Total Number of Dominant Species Across All Strata:	5 (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC:	60 (A/B)
4. _____				<b>Prevalence Index worksheet:</b>	
5. _____				<u>Total % Cover of:</u>	<u>Multiply By:</u>
6. _____				OBL species	0 x 1 = 0
7. _____				FACW species	40 x 2 = 80
	45 = Total Cover			FAC species	30 x 3 = 90
50% of total cover: <u>22.5</u>		20% of total cover: <u>9</u>		FACU species	20 x 4 = 80
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				UPL species	0 x 5 = 0
1. <i>Liquidambar styraciflua</i>	15	Yes	FAC	Column Totals	90 (A) 250 (B)
2. <i>Acer negundo</i>	10	Yes	FAC	Prevalence Index = B/A = <u>2.8</u>	
3. _____				<b>Hydrophytic Vegetation Indicators:</b>	
4. _____				____ 1 - Rapid Test for Hydrophytic Vegetation	
5. _____				<input checked="" type="checkbox"/> 2 - Dominance Test is >50%	
6. _____				<input checked="" type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>	
7. _____				____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
8. _____				____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
9. _____				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
	25 = Total Cover			<b>Definitions of Four Vegetation Strata:</b>	
50% of total cover: <u>12.5</u>		20% of total cover: <u>5</u>		<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
<b>Herb Stratum</b> (Plot size: <u>    </u> )				<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
1. <i>Allium vineale</i>	15	Yes	FACU	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
2. <i>Lonicera japonica</i>	5	Yes	FACU	<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
3. _____				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
4. _____					
5. _____					
6. _____					
7. _____					
	20 = Total Cover				
50% of total cover: <u>10</u>		20% of total cover: <u>4</u>			
<b>Woody Vine Stratum</b> (Plot size: <u>    </u> )					
1. _____					
2. _____					
3. _____					
4. _____					
5. _____					
	0 = Total Cover				
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>			
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>					
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).					



Photo of Sample Plot  
North



Photo of Sample Plot  
East



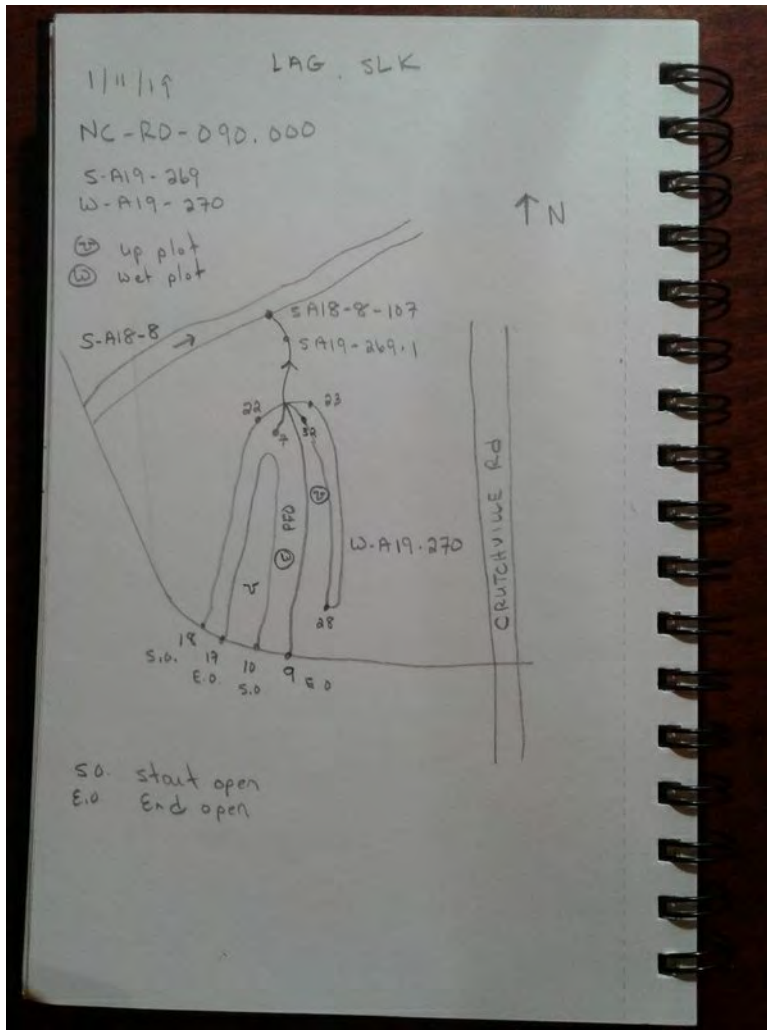
Photo of Sample Plot South



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: Reidsville, Rockingham... Sampling Date: 2019-Jan-11  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-270\_UPL-1  
 Investigator(s): Laura Giese, Simon King Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Foot slope Local relief (concave, convex, none): Concave Slope (%): 1 to 10  
 Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.4070258 Long: -79.6468279 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:  Covertype is UPL. Area is upland, not all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>			<u>Secondary Indicators (minimum of two required)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)			
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)			
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)			
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)			
		<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>					
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	28		
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	26		
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

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

Sampling Point: W-A19-270 UPL-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status																																									
1. <i>Betula nigra</i>	40	Yes	FACW	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B) <b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 20%; text-align: center;"><u>Total % Cover of:</u></th> <th style="width: 10%;"></th> <th style="width: 20%; text-align: center;"><u>Multiply By:</u></th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;">0</td> <td></td> <td style="text-align: center;">x 1 =</td> <td style="text-align: center;">0</td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;">40</td> <td></td> <td style="text-align: center;">x 2 =</td> <td style="text-align: center;">80</td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;">40</td> <td></td> <td style="text-align: center;">x 3 =</td> <td style="text-align: center;">120</td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;">55</td> <td></td> <td style="text-align: center;">x 4 =</td> <td style="text-align: center;">220</td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;">0</td> <td></td> <td style="text-align: center;">x 5 =</td> <td style="text-align: center;">0</td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;">135</td> <td style="text-align: center;">(A)</td> <td></td> <td style="text-align: center;">420 (B)</td> </tr> <tr> <td colspan="4" style="text-align: right;">Prevalence Index = B/A =</td> <td style="text-align: center;"><u>3.1</u></td> </tr> </tbody> </table>		<u>Total % Cover of:</u>		<u>Multiply By:</u>		OBL species	0		x 1 =	0	FACW species	40		x 2 =	80	FAC species	40		x 3 =	120	FACU species	55		x 4 =	220	UPL species	0		x 5 =	0	Column Totals	135	(A)		420 (B)	Prevalence Index = B/A =				<u>3.1</u>
	<u>Total % Cover of:</u>		<u>Multiply By:</u>																																									
OBL species	0		x 1 =		0																																							
FACW species	40		x 2 =		80																																							
FAC species	40		x 3 =		120																																							
FACU species	55		x 4 =		220																																							
UPL species	0		x 5 =		0																																							
Column Totals	135	(A)		420 (B)																																								
Prevalence Index = B/A =				<u>3.1</u>																																								
2. <i>Liriodendron tulipifera</i>	5	No	FACU																																									
3. _____																																												
4. _____																																												
5. _____																																												
6. _____																																												
7. _____																																												
45 = Total Cover																																												
50% of total cover: <u>22.5</u>		20% of total cover: <u>9</u>																																										
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																																												
1. <i>Acer negundo</i>	20	Yes	FAC	<b>Hydrophytic Vegetation Indicators:</b> ____ 1- Rapid Test for Hydrophytic Vegetation ____ 2 - Dominance Test is > 50% ____ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup> ____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic <b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.  Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																																								
2. <i>Asimina triloba</i>	20	Yes	FAC																																									
3. <i>Ligustrum sinense</i>	15	Yes	FACU																																									
4. _____																																												
5. _____																																												
6. _____																																												
7. _____																																												
8. _____																																												
9. _____																																												
55 = Total Cover																																												
50% of total cover: <u>27.5</u>		20% of total cover: <u>11</u>																																										
<b>Herb Stratum</b> (Plot size: <u>5'</u> )																																												
1. <i>Allium vineale</i>	20	Yes	FACU																																									
2. <i>Lonicera japonica</i>	15	Yes	FACU																																									
3. _____																																												
4. _____																																												
5. _____																																												
6. _____																																												
7. _____																																												
8. _____																																												
9. _____																																												
10. _____																																												
11. _____																																												
35 = Total Cover																																												
50% of total cover: <u>17.5</u>		20% of total cover: <u>7</u>																																										
<b>Woody Vine Stratum</b> (Plot size: <u>30'</u> )																																												
1. _____																																												
2. _____																																												
3. _____																																												
4. _____																																												
5. _____																																												
0 = Total Cover																																												
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>																																										
Remarks: (Include photo numbers here or on a separate sheet.)																																												



SOIL

Sampling Point: W-A19-270 UPL-1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 2	7.5YR 3/2	100					Silt Loam	
2 - 20	7.5YR 4/3	95	10YR 5/1	5	D	M	Silty Clay Loam	
20 - 26	7.5YR 4/4	90	2.5Y 5/2	10	D	M	Silt Loam	has manganese
26 - 30	10YR 5/2	80	N 6/	20	D	M	Sandy Loam	

<sup>1</sup>Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup>Location: PL = Pore Lining, M = Matrix.

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

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

Restrictive Layer (if observed): Type: <u>None</u> Depth (inches): _____	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
--	--

Remarks:

the bottom of the picture is the top of the soil.

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: Leaksville, Rockingha... Sampling Date: 2019-Jan-15  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-274\_PEM-1  
 Investigator(s): Laura Giese, Simon King, Doreen Donovan 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: 36.525598 Long: -79.6484212 Datum: WGS84  
 Soil Map Unit Name: Dan River loam, 0 to 2 percent slopes, frequently flooded NWI classification:  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b>			
Covertypes is PEM. Area is wetland, all three wetland parameters are present. Reddish color floodplain soils may be masking field indicators.			

**HYDROLOGY**

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

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

Sampling Point: W-A19-274 PEM-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>4</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>4</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100</u> (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>	
5. _____	_____	_____	_____	<u>Total % Cover of:</u>	<u>Multiply By:</u>
6. _____	_____	_____	_____	OBL species	<u>20</u> x 1 = <u>20</u>
7. _____	_____	_____	_____	FACW species	<u>70</u> x 2 = <u>140</u>
_____ = Total Cover				FAC species	<u>15</u> x 3 = <u>45</u>
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				FACU species	<u>0</u> x 4 = <u>0</u>
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15'</u> )				UPL species	<u>0</u> x 5 = <u>0</u>
1. _____	_____	_____	_____	Column Totals	<u>105</u> (A) <u>205</u> (B)
2. _____	_____	_____	_____	Prevalence Index = B/A = <u>2</u>	
3. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b>	
4. _____	_____	_____	_____	___ 1 - Rapid Test for Hydrophytic Vegetation	
5. _____	_____	_____	_____	<input checked="" type="checkbox"/> 2 - Dominance Test is >50%	
6. _____	_____	_____	_____	<input checked="" type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>	
7. _____	_____	_____	_____	___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
8. _____	_____	_____	_____	___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
9. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
_____ = Total Cover				<b>Definitions of Four Vegetation Strata:</b>	
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
<b>Herb Stratum</b> (Plot size: <u>5'</u> )				<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
1. <u>Juncus effusus</u>	45	Yes	FACW	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
2. <u>Carex frankii</u>	15	Yes	OBL	<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
3. <u>Carex squarrosa</u>	15	Yes	FACW	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
4. <u>Microstegium vimineum</u>	15	Yes	FAC		
5. <u>Agrimonia parviflora</u>	5	No	FACW		
6. <u>Mimulus ringens</u>	5	No	OBL		
7. <u>Ludwigia alternifolia</u>	5	No	FACW		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
_____ = Total Cover					
50% of total cover: <u>52.5</u> 20% of total cover: <u>21</u>					
<b>Woody Vine Stratum</b> (Plot size: <u>30'</u> )					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
_____ = Total Cover					
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>					
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>					
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).					

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 2	7.5YR 4/3	100					Silt Loam	
2 - 10	7.5YR 4/4	95	2.5Y 5/2	5	D	M	Silty Clay Loam	
10 - 20	7.5YR 4/4	95	2.5Y 5/1	5			Clay Loam	
<sup>1</sup> Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup> Location: PL = Pore Lining, M = Matrix.								
<b>Hydric Soil Indicators:</b>			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>					
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Dark Surface (S7)			<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148)			<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)			<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> Stratified Layers (A5)			<input type="checkbox"/> Depleted Matrix (F3)			<input checked="" type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> 2 cm Muck (A10) (LRR N)			<input type="checkbox"/> Redox Dark Surface (F6)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)			<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136)					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)					
<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148)					
<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)					
<b>Restrictive Layer (if observed):</b>			<b>Hydric Soil Present?</b>			<b>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></b>		
Type: <u>        None        </u>								
Depth (inches): <u>                                </u>								
<b>Remarks:</b>								
<p>The criterion for hydric soil is met.</p>								

Photo of Sample Plot  
North



Photo of Sample Plot  
East





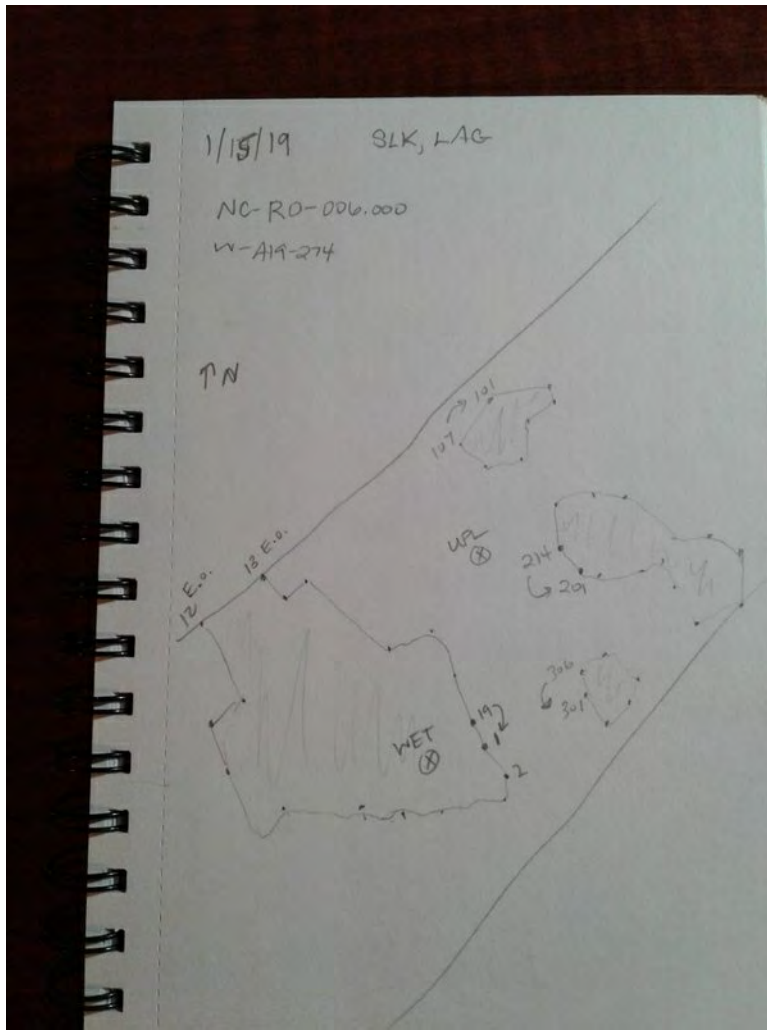
Photo of Sample Plot  
South



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: Leaksville, Rockingha... Sampling Date: 2019-Jan-15  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-274\_UPL-1  
 Investigator(s): Laura Giese, Simon King Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Flood Plain Local relief (concave, convex, none): Undulating Slope (%): 1 to 3  
 Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5257485 Long: -79.6492571 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:  Covertype is UPL. Area is upland, not all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>			<u>Secondary Indicators (minimum of two required)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)		
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Stunted or Stressed Plants (D1)		
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)		
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Microtopographic Relief (D4)	<input type="checkbox"/> FAC-Neutral Test (D5)		
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Iron Deposits (B5)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)					
<input type="checkbox"/> Water-Stained Leaves (B9)					
<input type="checkbox"/> Aquatic Fauna (B13)					
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)			Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  					
Remarks:  The criterion for wetland hydrology is not met. No positive indication of wetland hydrology was observed.					

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

Sampling Point: W-A19-274 UPL-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status																									
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)																								
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
6. _____	_____	_____	_____																									
7. _____	_____	_____	_____																									
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:40%;"></th> <th style="width:20%; text-align: center;"><u>Total % Cover of:</u></th> <th style="width:40%; text-align: center;"><u>Multiply By:</u></th> </tr> </thead> <tbody> <tr><td>OBL species</td><td style="text-align: center;"><u>0</u></td><td style="text-align: center;">x 1 = <u>0</u></td></tr> <tr><td>FACW species</td><td style="text-align: center;"><u>45</u></td><td style="text-align: center;">x 2 = <u>90</u></td></tr> <tr><td>FAC species</td><td style="text-align: center;"><u>0</u></td><td style="text-align: center;">x 3 = <u>0</u></td></tr> <tr><td>FACU species</td><td style="text-align: center;"><u>25</u></td><td style="text-align: center;">x 4 = <u>100</u></td></tr> <tr><td>UPL species</td><td style="text-align: center;"><u>0</u></td><td style="text-align: center;">x 5 = <u>0</u></td></tr> <tr><td>Column Totals</td><td style="text-align: center;"><u>70</u></td><td style="text-align: center;"><u>(A)</u> <u>190</u> <u>(B)</u></td></tr> <tr><td colspan="3" style="text-align: center;">Prevalence Index = B/A = <u>2.7</u></td></tr> </tbody> </table>		<u>Total % Cover of:</u>	<u>Multiply By:</u>	OBL species	<u>0</u>	x 1 = <u>0</u>	FACW species	<u>45</u>	x 2 = <u>90</u>	FAC species	<u>0</u>	x 3 = <u>0</u>	FACU species	<u>25</u>	x 4 = <u>100</u>	UPL species	<u>0</u>	x 5 = <u>0</u>	Column Totals	<u>70</u>	<u>(A)</u> <u>190</u> <u>(B)</u>	Prevalence Index = B/A = <u>2.7</u>		
	<u>Total % Cover of:</u>	<u>Multiply By:</u>																										
OBL species	<u>0</u>	x 1 = <u>0</u>																										
FACW species	<u>45</u>	x 2 = <u>90</u>																										
FAC species	<u>0</u>	x 3 = <u>0</u>																										
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UPL species	<u>0</u>	x 5 = <u>0</u>																										
Column Totals	<u>70</u>	<u>(A)</u> <u>190</u> <u>(B)</u>																										
Prevalence Index = B/A = <u>2.7</u>																												
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																												
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u> )				<b>Hydrophytic Vegetation Indicators:</b> ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is > 50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 <sup>1</sup> ___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic																								
1. _____	_____	_____	_____																									
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
6. _____	_____	_____	_____																									
7. _____	_____	_____	_____																									
8. _____	_____	_____	_____																									
9. _____	_____	_____	_____																									
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																												
<u>Herb Stratum</u> (Plot size: <u>5'</u> )				<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																								
1. <u>Carex sp.</u>	<u>45</u>	Yes	FACW																									
2. <u>Ligustrum sinense</u>	<u>25</u>	Yes	FACU																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
6. _____	_____	_____	_____																									
7. _____	_____	_____	_____																									
8. _____	_____	_____	_____																									
9. _____	_____	_____	_____																									
10. _____	_____	_____	_____																									
11. _____	_____	_____	_____																									
<u>70</u> = Total Cover 50% of total cover: <u>35</u> 20% of total cover: <u>14</u>																												
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u> )				<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																								
1. _____	_____	_____	_____																									
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																												
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>  A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).																												

**SOIL**

Sampling Point: W-A19-274 UPL-1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 2	7.5YR 4/3	100					Silt Loam	
2 - 15	7.5YR 4/4	98	7.5YR 4/2	2	D	M	Clay Loam	
15 - 20	7.5YR 4/6	95	7.5YR 4/2	5	D	M	Clay Loam	

<sup>1</sup>Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup>Location: PL = Pore Lining, M = Matrix.

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

<b>Restrictive Layer (if observed):</b> Type: _____ None _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
--	---

**Remarks:**

No positive indication of hydric soils was observed. The criterion for hydric soil is not met.

Vegetation Photos



Soil Photos



right is top

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: Reidsville, Rockingham... Sampling Date: 2019-Jan-16  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-277\_PEM-1  
 Investigator(s): Laura Giese, Simon King, Heather Patti Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Back slope Local relief (concave, convex, none): Concave Slope (%): 2 to 5  
 Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.3688569 Long: -79.6216526 Datum: WGS84  
 Soil Map Unit Name: Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded NWI classification:  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:  Covertype is PEM. Area is wetland, all three wetland parameters are present. Active pasture.		

**HYDROLOGY**

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

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

Sampling Point: W-A19-277 PEM-1

	Absolute % Cover	Dominant Species?	Indicator Status																																									
<b>Tree Stratum (Plot size: <u>30</u>)</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 20%; text-align: center;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 20%; text-align: center;">Multiply By:</th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 1 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>45</u></td> <td></td> <td style="text-align: center;">x 2 =</td> <td style="text-align: center;"><u>90</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 3 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>15</u></td> <td></td> <td style="text-align: center;">x 4 =</td> <td style="text-align: center;"><u>60</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 5 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;"><u>60</u></td> <td style="text-align: center;">(A)</td> <td></td> <td style="text-align: center;"><u>150</u> (B)</td> </tr> <tr> <td colspan="4" style="text-align: right;">Prevalence Index = B/A =</td> <td style="text-align: center;"><u>2.5</u></td> </tr> </tbody> </table>		Total % Cover of:		Multiply By:		OBL species	<u>0</u>		x 1 =	<u>0</u>	FACW species	<u>45</u>		x 2 =	<u>90</u>	FAC species	<u>0</u>		x 3 =	<u>0</u>	FACU species	<u>15</u>		x 4 =	<u>60</u>	UPL species	<u>0</u>		x 5 =	<u>0</u>	Column Totals	<u>60</u>	(A)		<u>150</u> (B)	Prevalence Index = B/A =				<u>2.5</u>
	Total % Cover of:		Multiply By:																																									
OBL species	<u>0</u>		x 1 =		<u>0</u>																																							
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5. _____	_____	_____	_____																																									
6. _____	_____	_____	_____																																									
7. _____	_____	_____	_____																																									
<u>0</u> = Total Cover																																												
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																												
<b>Sapling/Shrub Stratum (Plot size: <u>15</u>)</b>																																												
1. _____	_____	_____	_____																																									
2. _____	_____	_____	_____																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
5. _____	_____	_____	_____																																									
6. _____	_____	_____	_____																																									
7. _____	_____	_____	_____																																									
8. _____	_____	_____	_____																																									
9. _____	_____	_____	_____																																									
<u>0</u> = Total Cover																																												
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																												
<b>Herb Stratum (Plot size: <u>5</u>)</b>																																												
1. <i>Poa palustris</i>	25	Yes	FACW																																									
2. <i>Festuca rubra</i>	15	Yes	FACU																																									
3. <i>Ranunculus abortivus</i>	15	Yes	FACW																																									
4. <i>Juncus effusus</i>	5	No	FACW																																									
5. _____	_____	_____	_____																																									
6. _____	_____	_____	_____																																									
7. _____	_____	_____	_____																																									
8. _____	_____	_____	_____																																									
9. _____	_____	_____	_____																																									
10. _____	_____	_____	_____																																									
11. _____	_____	_____	_____																																									
<u>60</u> = Total Cover																																												
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<b>Woody Vine Stratum (Plot size: <u>30</u>)</b>																																												
1. _____	_____	_____	_____																																									
2. _____	_____	_____	_____																																									
3. _____	_____	_____	_____																																									
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<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>																																												
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).																																												
<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																																												



Photo of Sample Plot  
North



Photo of Sample Plot  
East



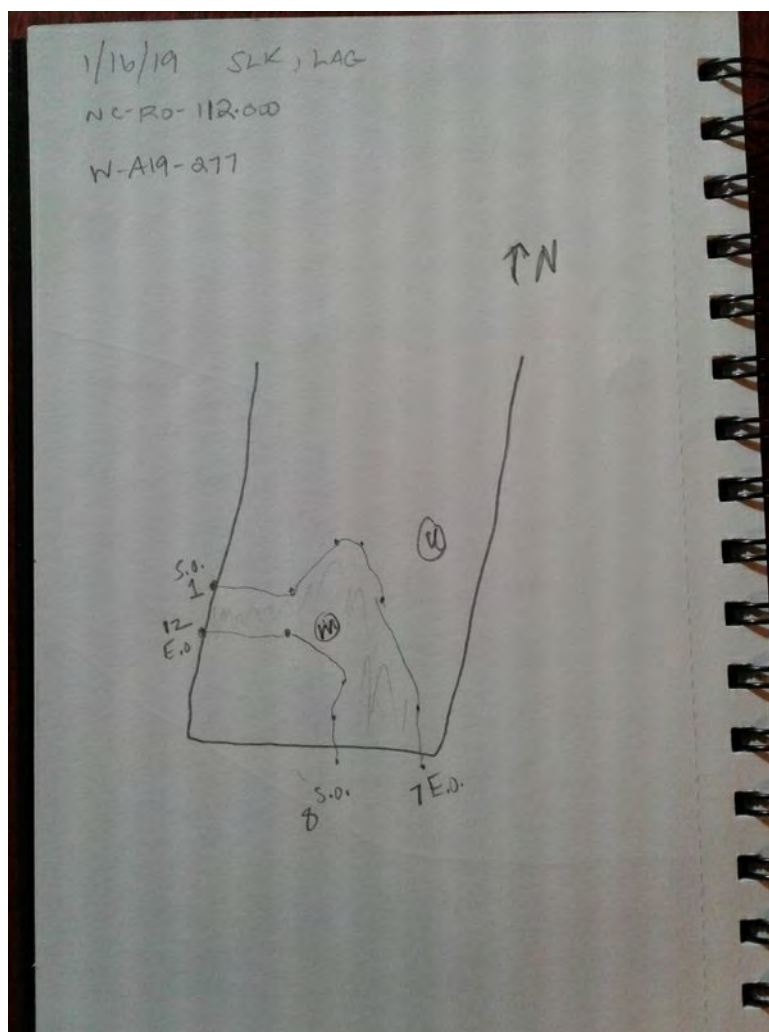
Photo of Sample Plot South



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: Reidsville, Rockingham... Sampling Date: 2019-Jan-16  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-277\_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): MLRA 136 of LRR P Lat: 36.3688659 Long: -79.6216988 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:		
Covertypes is UPL. Active pasture .		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	
The criterion for wetland hydrology is not met. No positive indication of wetland hydrology was observed.	



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

Sampling Point: W-A19-277 UPL-1

	Absolute % Cover	Dominant Species?	Indicator Status																																	
<b>Tree Stratum (Plot size: <u>30</u>)</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 20%; text-align: center;">Total % Cover of:</th> <th style="width: 20%;"></th> <th style="width: 20%; text-align: center;">Multiply By:</th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;"><u>0</u></td> <td>x 1 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>5</u></td> <td>x 2 =</td> <td style="text-align: center;"><u>10</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>0</u></td> <td>x 3 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>55</u></td> <td>x 4 =</td> <td style="text-align: center;"><u>220</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td>x 5 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;"><u>60</u></td> <td>(A)</td> <td style="text-align: center;"><u>230</u> (B)</td> </tr> <tr> <td colspan="4" style="text-align: center;">Prevalence Index = B/A = <u>3.8</u></td> </tr> </tbody> </table>		Total % Cover of:		Multiply By:	OBL species	<u>0</u>	x 1 =	<u>0</u>	FACW species	<u>5</u>	x 2 =	<u>10</u>	FAC species	<u>0</u>	x 3 =	<u>0</u>	FACU species	<u>55</u>	x 4 =	<u>220</u>	UPL species	<u>0</u>	x 5 =	<u>0</u>	Column Totals	<u>60</u>	(A)	<u>230</u> (B)	Prevalence Index = B/A = <u>3.8</u>			
	Total % Cover of:		Multiply By:																																	
OBL species	<u>0</u>	x 1 =	<u>0</u>																																	
FACW species	<u>5</u>	x 2 =	<u>10</u>																																	
FAC species	<u>0</u>	x 3 =	<u>0</u>																																	
FACU species	<u>55</u>	x 4 =	<u>220</u>																																	
UPL species	<u>0</u>	x 5 =	<u>0</u>																																	
Column Totals	<u>60</u>	(A)	<u>230</u> (B)																																	
Prevalence Index = B/A = <u>3.8</u>																																				
1. _____	_____	_____	_____																																	
2. _____	_____	_____	_____																																	
3. _____	_____	_____	_____																																	
4. _____	_____	_____	_____																																	
5. _____	_____	_____	_____																																	
6. _____	_____	_____	_____																																	
7. _____	_____	_____	_____																																	
<u>0</u> = Total Cover																																				
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>																																		
<b>Sapling/Shrub Stratum (Plot size: <u>15</u>)</b>																																				
1. _____	_____	_____	_____																																	
2. _____	_____	_____	_____																																	
3. _____	_____	_____	_____																																	
4. _____	_____	_____	_____																																	
5. _____	_____	_____	_____																																	
6. _____	_____	_____	_____																																	
7. _____	_____	_____	_____																																	
8. _____	_____	_____	_____																																	
9. _____	_____	_____	_____																																	
<u>0</u> = Total Cover																																				
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>																																		
<b>Herb Stratum (Plot size: <u>5</u>)</b>																																				
1. <i>Festuca rubra</i>	45	Yes	FACU																																	
2. <i>Trifolium repens</i>	10	No	FACU																																	
3. <i>Poaceae</i>	10	No	NI																																	
4. <i>Ranunculus abortivus</i>	5	No	FACW																																	
5. _____	_____	_____	_____																																	
6. _____	_____	_____	_____																																	
7. _____	_____	_____	_____																																	
8. _____	_____	_____	_____																																	
9. _____	_____	_____	_____																																	
10. _____	_____	_____	_____																																	
11. _____	_____	_____	_____																																	
<u>70</u> = Total Cover																																				
50% of total cover: <u>35</u>		20% of total cover: <u>14</u>																																		
<b>Woody Vine Stratum (Plot size: <u>30</u>)</b>																																				
1. _____	_____	_____	_____																																	
2. _____	_____	_____	_____																																	
3. _____	_____	_____	_____																																	
4. _____	_____	_____	_____																																	
5. _____	_____	_____	_____																																	
<u>0</u> = Total Cover																																				
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>																																		
<b>Hydrophytic Vegetation Indicators:</b> _____ 1 - Rapid Test for Hydrophytic Vegetation _____ 2 - Dominance Test is > 50% _____ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup> _____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic																																				
<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																																				
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																																				
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>  Pasture. No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).																																				

SOIL

Sampling Point: W-A19-277 UPL-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 7	10YR 3/4	100					Silt Loam	
7 - 18	10YR 5/8	100					Clay	

<sup>1</sup>Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup>Location: PL = Pore Lining, M = Matrix.

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

Restrictive Layer (if observed):		Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Type:	None		
Depth (inches):			

Remarks:

No positive indication of hydric soils was observed. The criterion for hydric soil is not met.

Vegetation 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: Eden, Rockingham Co... Sampling Date: 2019-Jan-17  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-280\_PEM-1  
 Investigator(s): Laura Giese, Simon King 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: 36.5191406 Long: -79.6699783 Datum: WGS84  
 Soil Map Unit Name: Clover sandy loam, 2 to 8 percent slopes NWI classification:  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:  Covertype is PEM. Area is wetland, all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>			<u>Secondary Indicators (minimum of two required)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)			
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)			
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)			
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)			
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>					
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):			
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	15	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	6		
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:  Soil is episaturated. water rose to 7 inches.					

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

Sampling Point: W-A19-280 PEM-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	2 (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	2 (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	100 (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>	
5. _____	_____	_____	_____	<u>Total % Cover of:</u>	<u>Multiply By:</u>
6. _____	_____	_____	_____	OBL species	0 x 1 = 0
7. _____	_____	_____	_____	FACW species	75 x 2 = 150
	0 = Total Cover			FAC species	0 x 3 = 0
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>		FACU species	0 x 4 = 0
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				UPL species	0 x 5 = 0
1. _____	_____	_____	_____	Column Totals	75 (A) 150 (B)
2. _____	_____	_____	_____	Prevalence Index = B/A = <u>2</u>	
3. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b>	
4. _____	_____	_____	_____	___ 1 - Rapid Test for Hydrophytic Vegetation	
5. _____	_____	_____	_____	<input checked="" type="checkbox"/> 2 - Dominance Test is >50%	
6. _____	_____	_____	_____	<input checked="" type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>	
7. _____	_____	_____	_____	___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
8. _____	_____	_____	_____	___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
9. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
	0 = Total Cover			<b>Definitions of Four Vegetation Strata:</b>	
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>		<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
<b>Herb Stratum</b> (Plot size: <u>5</u> )				<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
1. <u>Juncus effusus</u>	40	Yes	FACW	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
2. <u>Carex sp.</u>	30	Yes	FACW	<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
3. <u>Solidago gigantea</u>	5	No	FACW		
4. <u>Asteraceae</u>	5	No	NI		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
	80 = Total Cover				
	50% of total cover: <u>40</u>	20% of total cover: <u>16</u>			
<b>Woody Vine Stratum</b> (Plot size: <u>30</u> )					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
	0 = Total Cover				
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>			
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>					
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).					





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: Eden, Rockingham Co... Sampling Date: 2019-Jan-17  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-280\_UPL-1  
 Investigator(s): Simon King, Laura Giese Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Back slope Local relief (concave, convex, none): Convex Slope (%): 1 to 10  
 Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5190296 Long: -79.6703356 Datum: WGS84  
 Soil Map Unit Name: Clover sandy loam, 2 to 8 percent slopes NWI classification:  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
<b>Remarks:</b>		
Covertypes is UPL. Area is upland, not all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (includes capillary fringe)	Depth (inches): _____	
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>		
<b>Remarks:</b>		
The criterion for wetland hydrology is not met.		

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

Sampling Point: W-A19-280 UPL-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: _____	0 (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____	3 (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____	0 (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>	
5. _____	_____	_____	_____	<u>Total % Cover of:</u>	<u>Multiply By:</u>
6. _____	_____	_____	_____	OBL species _____	x 1 = _____
7. _____	_____	_____	_____	FACW species _____	x 2 = _____
0 = Total Cover				FAC species _____	x 3 = _____
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				FACU species _____	x 4 = _____
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15'</u> )				UPL species _____	x 5 = _____
1. <i>Bidens vulgata</i>	_____	No	FAC	Column Totals _____	(A) (B)
2. <i>Rubus allegheniensis</i>	_____	No	FACU	Prevalence Index = B/A = _____	
3. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b>	
4. _____	_____	_____	_____	____ 1 - Rapid Test for Hydrophytic Vegetation	
5. _____	_____	_____	_____	____ 2 - Dominance Test is > 50%	
6. _____	_____	_____	_____	____ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>	
7. _____	_____	_____	_____	____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
8. _____	_____	_____	_____	____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
9. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
0 = Total Cover				<b>Definitions of Four Vegetation Strata:</b>	
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
<b>Herb Stratum</b> (Plot size: <u>5</u> )				<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
1. <i>Chamaecrista nictitans</i>	20	Yes	FACU	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
2. <i>Rubus allegheniensis</i>	10	Yes	FACU	<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
3. <i>Allium canadense</i>	10	Yes	FACU	<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
40 = Total Cover				<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
50% of total cover: <u>20</u> 20% of total cover: <u>8</u>					
<b>Woody Vine Stratum</b> (Plot size: <u>30'</u> )					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
0 = Total Cover					
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>					
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>					
No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC– or drier).					



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: Eden, Rockingham Co... Sampling Date: 2019-Jan-17  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-282\_PEM-1  
 Investigator(s): Laura Giese, Simon King Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Flood Plain Local relief (concave, convex, none): Concave Slope (%): 0 to 1  
 Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5291295 Long: -79.6518867 Datum: WGS84  
 Soil Map Unit Name: Codorus loam, 0 to 2 percent slopes, frequently flooded NWI classification:  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:  Covertype is PEM. Area is wetland, all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>3</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  	
Remarks:  The criterion for wetland hydrology is met.	

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

Sampling Point: W-A19-282 PEM-1

	Absolute % Cover	Dominant Species?	Indicator Status																																									
<b>Tree Stratum (Plot size: <u>30</u>)</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 10%; text-align: center;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 10%; text-align: center;">Multiply By:</th> <th style="width: 30%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;"><u>5</u></td> <td></td> <td style="text-align: center;">x 1 =</td> <td style="text-align: center;"><u>5</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>25</u></td> <td></td> <td style="text-align: center;">x 2 =</td> <td style="text-align: center;"><u>50</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>25</u></td> <td></td> <td style="text-align: center;">x 3 =</td> <td style="text-align: center;"><u>75</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 4 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 5 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;"><u>55</u></td> <td style="text-align: center;">(A)</td> <td></td> <td style="text-align: center;"><u>130</u> (B)</td> </tr> <tr> <td colspan="4" style="text-align: right;">Prevalence Index = B/A =</td> <td style="text-align: center;"><u>2.4</u></td> </tr> </tbody> </table>		Total % Cover of:		Multiply By:		OBL species	<u>5</u>		x 1 =	<u>5</u>	FACW species	<u>25</u>		x 2 =	<u>50</u>	FAC species	<u>25</u>		x 3 =	<u>75</u>	FACU species	<u>0</u>		x 4 =	<u>0</u>	UPL species	<u>0</u>		x 5 =	<u>0</u>	Column Totals	<u>55</u>	(A)		<u>130</u> (B)	Prevalence Index = B/A =				<u>2.4</u>
	Total % Cover of:		Multiply By:																																									
OBL species	<u>5</u>		x 1 =		<u>5</u>																																							
FACW species	<u>25</u>		x 2 =		<u>50</u>																																							
FAC species	<u>25</u>		x 3 =		<u>75</u>																																							
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50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																												
<b>Sapling/Shrub Stratum (Plot size: <u>15</u>)</b>																																												
1. <i>Salix nigra</i>	5	Yes	OBL																																									
2. _____	_____	_____	_____																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
5. _____	_____	_____	_____																																									
6. _____	_____	_____	_____																																									
7. _____	_____	_____	_____																																									
8. _____	_____	_____	_____																																									
9. _____	_____	_____	_____																																									
<u>5</u> = Total Cover																																												
50% of total cover: <u>2.5</u> 20% of total cover: <u>1</u>																																												
<b>Herb Stratum (Plot size: <u>5</u>)</b>																																												
1. <i>Juncus effusus</i>	25	Yes	FACW																																									
2. <i>Arthraxon hispidus</i>	25	Yes	FAC																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
5. _____	_____	_____	_____																																									
6. _____	_____	_____	_____																																									
7. _____	_____	_____	_____																																									
8. _____	_____	_____	_____																																									
9. _____	_____	_____	_____																																									
10. _____	_____	_____	_____																																									
11. _____	_____	_____	_____																																									
<u>50</u> = Total Cover																																												
50% of total cover: <u>25</u> 20% of total cover: <u>10</u>																																												
<b>Woody Vine Stratum (Plot size: <u>30</u>)</b>																																												
1. _____	_____	_____	_____																																									
2. _____	_____	_____	_____																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
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<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>																																												
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).																																												

SOIL

Sampling Point: W-A19-282 PEM-1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 3	10YR 4/2	100					Silt Loam	
3 - 5	10YR 5/2	95	7.5YR 4/6	5	C	M	Sandy Loam	
5 - 13	2.5Y 5/3	80	10YR 5/8	15	C	M	Sandy Loam	
5 - 13			2.5Y 5/1	5	D	M	Sandy Loam	manganese concretions
13 - 20	2.5Y 5/3	70	7.5YR 5/8	20	C	M	Sandy Clay Loam	
13 - 20			2.5Y 5/2	5	D	M	Sandy Clay Loam	

<sup>1</sup>Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup>Location: PL = Pore Lining, M = Matrix.

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

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

<b>Restrictive Layer (if observed):</b>		<b>Hydric Soil Present?</b>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Type:	None		
Depth (inches):			

Remarks:

A positive indication of hydric soil was observed. The criterion for hydric soil is met.

Photo of Sample Plot North



Photo of Sample Plot East



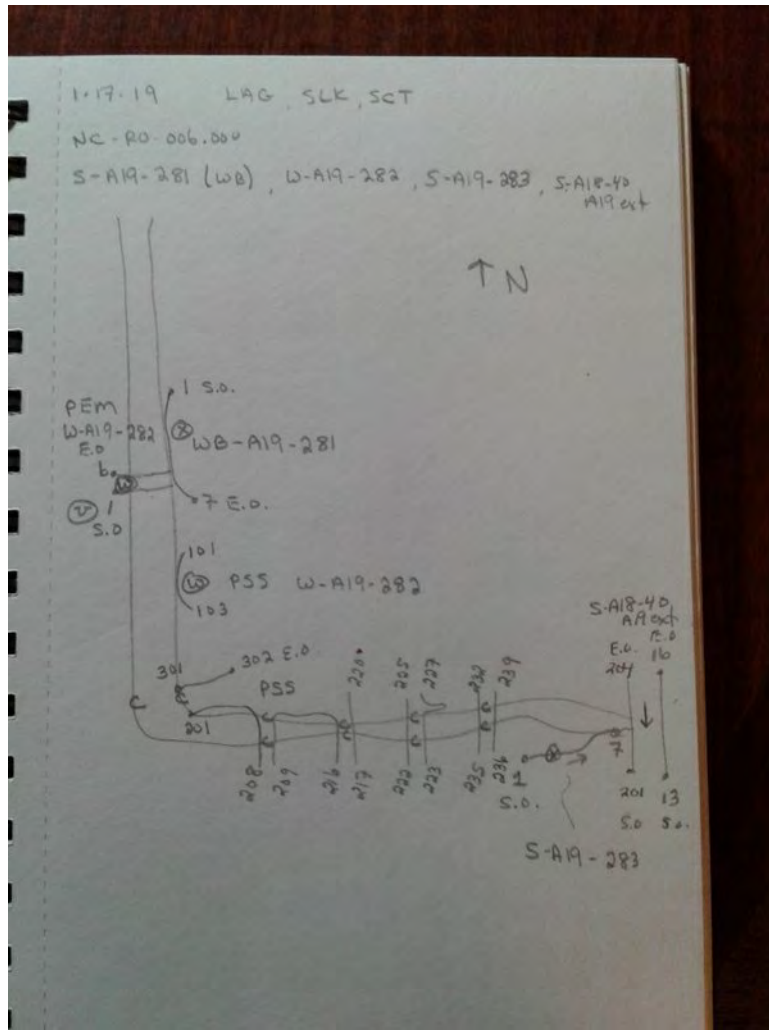
Photo of Sample Plot  
South



Photo of Sample Plot  
West



Photo of Sample Plot Sketch



**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: MVP Southgate City/County: Eden, Rockingham Co... Sampling Date: 2019-Jan-17  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-282\_PSS-1  
 Investigator(s): Laura Giese, Simon King 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: 36.5288433 Long: -79.6518163 Datum: WGS84  
 Soil Map Unit Name: Banister loam, 0 to 4 percent slopes, rarely flooded NWI classification:  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:  Covertype is PSS. Area is wetland, all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  	
Remarks:  The criterion for wetland hydrology is met.	

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

Sampling Point: W-A19-282 PSS-1

	Absolute % Cover	Dominant Species?	Indicator Status																																									
<b>Tree Stratum (Plot size: <u>30</u>)</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 10%; text-align: center;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 10%; text-align: center;">Multiply By:</th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;"><u>5</u></td> <td></td> <td style="text-align: center;">x 1 =</td> <td style="text-align: center;"><u>5</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>60</u></td> <td></td> <td style="text-align: center;">x 2 =</td> <td style="text-align: center;"><u>120</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>45</u></td> <td></td> <td style="text-align: center;">x 3 =</td> <td style="text-align: center;"><u>135</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 4 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 5 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;"><u>110</u></td> <td style="text-align: center;">(A)</td> <td></td> <td style="text-align: center;"><u>260</u> (B)</td> </tr> <tr> <td colspan="4" style="text-align: right;">Prevalence Index = B/A =</td> <td style="text-align: center;"><u>2.4</u></td> </tr> </tbody> </table>		Total % Cover of:		Multiply By:		OBL species	<u>5</u>		x 1 =	<u>5</u>	FACW species	<u>60</u>		x 2 =	<u>120</u>	FAC species	<u>45</u>		x 3 =	<u>135</u>	FACU species	<u>0</u>		x 4 =	<u>0</u>	UPL species	<u>0</u>		x 5 =	<u>0</u>	Column Totals	<u>110</u>	(A)		<u>260</u> (B)	Prevalence Index = B/A =				<u>2.4</u>
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4. _____	_____	_____	_____																																									
5. _____	_____	_____	_____																																									
6. _____	_____	_____	_____																																									
7. _____	_____	_____	_____																																									
<u>0</u> = Total Cover																																												
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																												
<b>Sapling/Shrub Stratum (Plot size: <u>15</u>)</b>																																												
1. <i>Acer negundo</i>	25	Yes	FAC																																									
2. <i>Fraxinus pennsylvanica</i>	15	Yes	FACW																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
5. _____	_____	_____	_____																																									
6. _____	_____	_____	_____																																									
7. _____	_____	_____	_____																																									
8. _____	_____	_____	_____																																									
9. _____	_____	_____	_____																																									
<u>40</u> = Total Cover																																												
50% of total cover: <u>20</u> 20% of total cover: <u>8</u>																																												
<b>Herb Stratum (Plot size: <u>5</u>)</b>																																												
1. <i>Juncus effusus</i>	20	Yes	FACW																																									
2. <i>Carex sp.</i>	20	Yes	FACW																																									
3. <i>Arthraxon hispidus</i>	20	Yes	FAC																																									
4. <i>Persicaria lapathifolia</i>	5	No	FACW																																									
5. <i>Mimulus ringens</i>	5	No	OBL																																									
6. _____	_____	_____	_____																																									
7. _____	_____	_____	_____																																									
8. _____	_____	_____	_____																																									
9. _____	_____	_____	_____																																									
10. _____	_____	_____	_____																																									
11. _____	_____	_____	_____																																									
<u>70</u> = Total Cover																																												
50% of total cover: <u>35</u> 20% of total cover: <u>14</u>																																												
<b>Woody Vine Stratum (Plot size: <u>30</u>)</b>																																												
1. _____	_____	_____	_____																																									
2. _____	_____	_____	_____																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
5. _____	_____	_____	_____																																									
<u>0</u> = Total Cover																																												
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																												
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>																																												
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).																																												





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



200 series, West

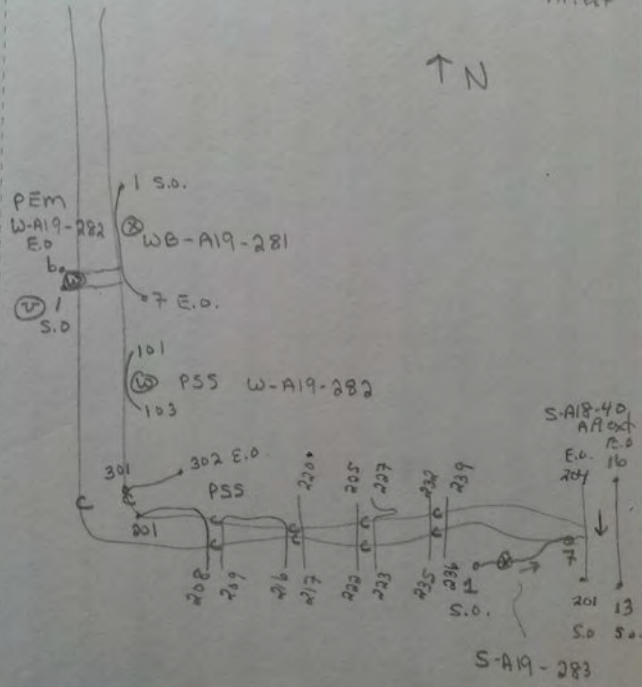


200 series, culvert under road

1.17.19 LAG, SLK, SCT

NC-AD-006.000

S-A19-281 (WB), W-A19-282, S-A19-283, S-A18-40  
A19 ext



**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: MVP Southgate City/County: Reidsville, Rockingham Sampling Date: 2018-May-22  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-B18-43\_PEM-1  
 Investigator(s): James Bolduc, Tony Tredway, Heather Patti 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: 36.369689 Long: -79.6197466 Datum: WGS84  
 Soil Map Unit Name: Fairview-Poplar Forest complex, 15 to 25 percent slopes NWI classification: None  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:  Covertypes is PEM. vegetation disturbed by active cow traffic.		

**HYDROLOGY**

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

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

Sampling Point: W-B18-43 PEM-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. <u><i>Ulmus americana</i></u>	60	Yes	FACW	Number of Dominant Species That Are OBL, FACW, or FAC:	3 (A)
2. <u><i>Liquidambar styraciflua</i></u>	20	Yes	FAC	Total Number of Dominant Species Across All Strata:	4 (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC:	75 (A/B)
4. _____				<b>Prevalence Index worksheet:</b>	
5. _____				<u>Total % Cover of:</u>	<u>Multiply By:</u>
6. _____				OBL species	0 x 1 = 0
7. _____				FACW species	130 x 2 = 260
	80 = Total Cover			FAC species	20 x 3 = 60
50% of total cover: <u>40</u>		20% of total cover: <u>16</u>		FACU species	70 x 4 = 280
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				UPL species	0 x 5 = 0
1. _____				Column Totals	220 (A) 600 (B)
2. _____				Prevalence Index = B/A = <u>2.7</u>	
3. _____				<b>Hydrophytic Vegetation Indicators:</b>	
4. _____				____ 1- Rapid Test for Hydrophytic Vegetation	
5. _____				<input checked="" type="checkbox"/> 2 - Dominance Test is >50%	
6. _____				<input checked="" type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>	
7. _____				____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
8. _____				____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
9. _____				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
	0 = Total Cover			<b>Definitions of Four Vegetation Strata:</b>	
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
<b>Herb Stratum</b> (Plot size: <u>5</u> )				<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
1. <u><i>Persicaria lapathifolia</i></u>	50	Yes	FACW	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
2. <u><i>Poa pratensis</i></u>	50	Yes	FACU	<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
3. <u><i>Ranunculus abortivus</i></u>	20	No	FACW		
4. <u><i>Trifolium repens</i></u>	20	No	FACU		
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
	140 = Total Cover				
50% of total cover: <u>70</u>		20% of total cover: <u>28</u>			
<b>Woody Vine Stratum</b> (Plot size: <u>30</u> )					
1. _____					
2. _____					
3. _____					
4. _____					
5. _____					
	0 = Total Cover				
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>			
<b>Remarks:</b> (Include photo numbers here or on a separate sheet.)					





Vegetation Photos



Soil Photos



Photo of Sample Plot North



Photo of Sample Plot East



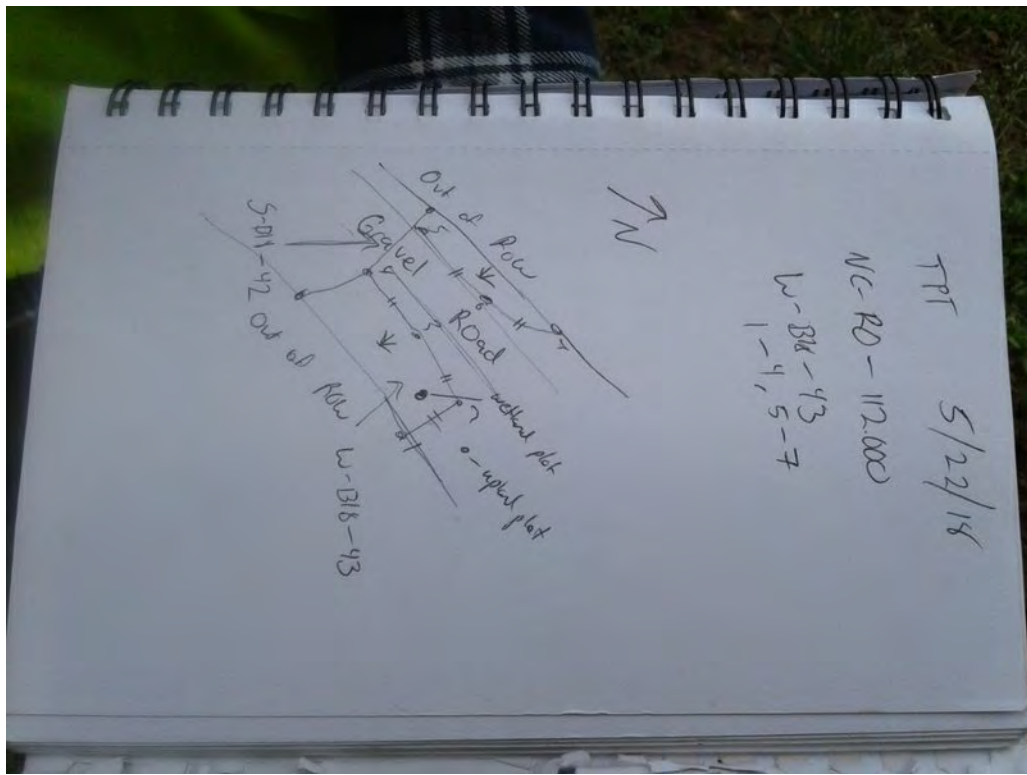
Photo of Sample Plot South



Photo of Sample Plot West



Photo of Sample Plot Sketch



A19 ext north



A19 ext, east



A19 ext, south



A19 ext, west

1/16/19 SLK, LAG

NC-RD-112.000

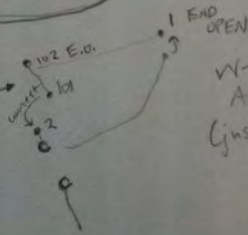
S-B18-41 AM EXT

(Flags 1, 101 & 102; 201 & 202)

TN



S-B18-42  
AM EXT.  
(Flags 101 & 102)



W-B18-43  
AM EXT.  
(just flag 1)

**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: MVP Southgate City/County: Reidsville, Rockingham Sampling Date: 2018-May-31  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-B18-67\_PEM-1  
 Investigator(s): Will Buetow, Simon King, Heather Patti Section, Township, Range:  
 Landform (hillslope, terrace, etc.): drainage Local relief (concave, convex, none): Concave Slope (%): 1 to 10  
 Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.3339819 Long: -79.6021059 Datum: WGS84  
 Soil Map Unit Name: Fairview-Poplar Forest complex, 8 to 15 percent slopes, moderately eroded NWI classification: None  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes \_\_\_ No  (If no, explain in Remarks.)  
 Are Vegetation \_\_, Soil \_\_, or Hydrology \_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_  
 Are Vegetation \_\_, Soil \_\_, or Hydrology \_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No ___	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No ___
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No ___	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No ___	
Remarks:  Covertype is PEM. Area is wetland, all three wetland parameters are present. access road break s up wetland. No culvert present..		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>			<u>Secondary Indicators (minimum of two required)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)			
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)			
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)			
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)			
		<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b> Surface Water Present? Yes ___ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes ___ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No ___ Depth (inches): <u>4</u> (includes capillary fringe)			Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No ___		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  _____ _____					
Remarks:  The criterion for wetland hydrology is met.					



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

Sampling Point: W-B18-67 PEM-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: _____	2 (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____	3 (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____	66.7 (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>	
5. _____	_____	_____	_____	<u>Total % Cover of:</u>	<u>Multiply By:</u>
6. _____	_____	_____	_____	OBL species _____	x 1 = _____
7. _____	_____	_____	_____	FACW species _____	x 2 = _____
_____ = Total Cover				FAC species _____	x 3 = _____
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				FACU species _____	x 4 = _____
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				UPL species _____	x 5 = _____
1. _____	_____	_____	_____	Column Totals _____	(A) 305 (B)
2. _____	_____	_____	_____	Prevalence Index = B/A = <u>3.1</u>	
3. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b>	
4. _____	_____	_____	_____	____ 1 - Rapid Test for Hydrophytic Vegetation	
5. _____	_____	_____	_____	<input checked="" type="checkbox"/> 2 - Dominance Test is >50%	
6. _____	_____	_____	_____	____ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>	
7. _____	_____	_____	_____	____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
8. _____	_____	_____	_____	____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
9. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
_____ = Total Cover				<b>Definitions of Four Vegetation Strata:</b>	
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
<b>Herb Stratum</b> (Plot size: <u>5</u> )				<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
1. <i>Euthamia graminifolia</i>	30	Yes	FAC	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
2. <i>Solidago canadensis</i>	20	Yes	FACU	<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
3. <i>Microstegium vimineum</i>	20	Yes	FAC	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
4. <i>Carex lurida</i>	15	No	OBL		
5. <i>Urtica dioica</i>	10	No	FACU		
6. <i>Parthenocissus quinquefolia</i>	5	No	FACU		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
_____ = Total Cover					
50% of total cover: <u>50</u> 20% of total cover: <u>20</u>					
<b>Woody Vine Stratum</b> (Plot size: <u>30</u> )					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
_____ = Total Cover					
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>					
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>					
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).					



Photo of Sample Plot  
North



Photo of Sample Plot  
East

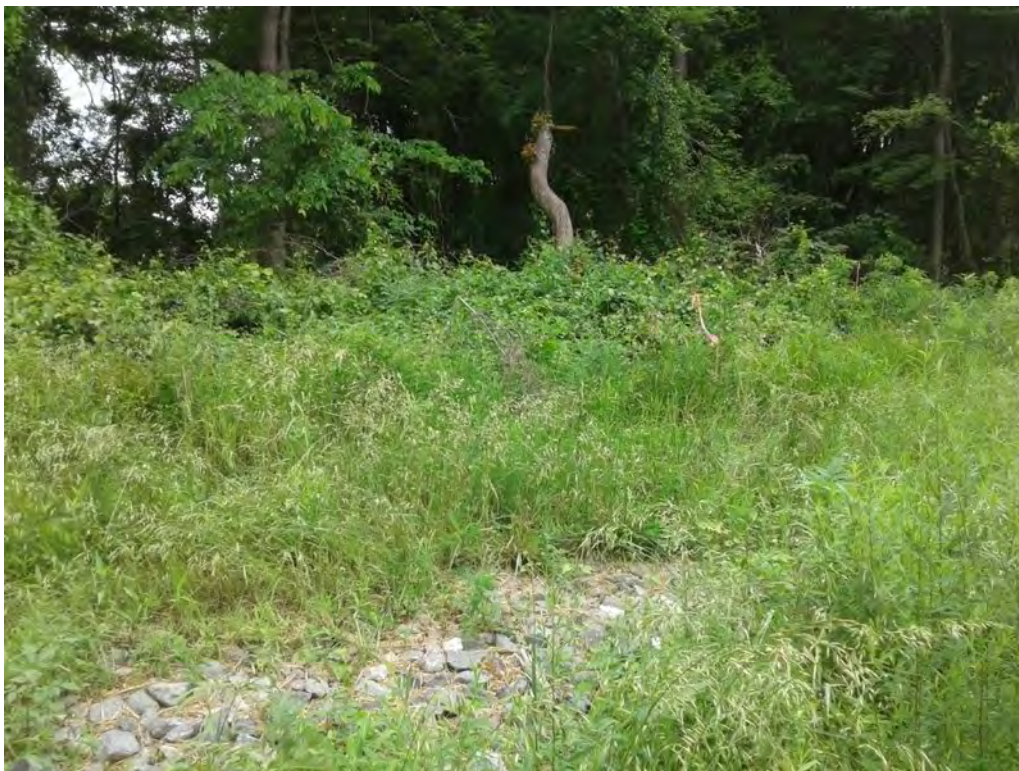


Photo of Sample Plot South



Photo of Sample Plot West



Photo of Sample Plot Sketch



A19 new boundary center, north

**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: MVP Southgate City/County: Eden, Rockingham Sampling Date: 2018-June-08  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-B18-103\_PEM-1  
 Investigator(s): Will Buetow, Jake Brillo, Jim Bolduc Section, Township, Range:  
 Landform (hillslope, terrace, etc.): hillside seep and floodplain Local relief (concave, convex, none): Concave Slope (%): 2 to 5  
 Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.4860202 Long: -79.6853448 Datum: WGS84  
 Soil Map Unit Name: Fairview-Poplar Forest complex, 15 to 25 percent slopes NWI classification: None  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
<b>Remarks:</b>		
Covertypes is PEM. Area is wetland, all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>3</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>0</u>	
(includes capillary fringe)		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>		
<b>Remarks:</b>		
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-B18-103 PEM-1

	Absolute % Cover	Dominant Species?	Indicator Status																																									
<b>Tree Stratum (Plot size: <u>30</u>)</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 20%; text-align: center;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 20%; text-align: center;">Multiply By:</th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;"><u>15</u></td> <td></td> <td style="text-align: center;">x 1 =</td> <td style="text-align: center;"><u>15</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>65</u></td> <td></td> <td style="text-align: center;">x 2 =</td> <td style="text-align: center;"><u>130</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>10</u></td> <td></td> <td style="text-align: center;">x 3 =</td> <td style="text-align: center;"><u>30</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 4 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 5 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;"><u>90</u></td> <td style="text-align: center;">(A)</td> <td></td> <td style="text-align: center;"><u>175</u> (B)</td> </tr> <tr> <td colspan="4" style="text-align: right;">Prevalence Index = B/A =</td> <td style="text-align: center;"><u>1.9</u></td> </tr> </tbody> </table> <b>Hydrophytic Vegetation Indicators:</b> ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 <sup>1</sup> ___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic  <b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.   Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Total % Cover of:		Multiply By:		OBL species	<u>15</u>		x 1 =	<u>15</u>	FACW species	<u>65</u>		x 2 =	<u>130</u>	FAC species	<u>10</u>		x 3 =	<u>30</u>	FACU species	<u>0</u>		x 4 =	<u>0</u>	UPL species	<u>0</u>		x 5 =	<u>0</u>	Column Totals	<u>90</u>	(A)		<u>175</u> (B)	Prevalence Index = B/A =				<u>1.9</u>
	Total % Cover of:		Multiply By:																																									
OBL species	<u>15</u>		x 1 =		<u>15</u>																																							
FACW species	<u>65</u>		x 2 =		<u>130</u>																																							
FAC species	<u>10</u>		x 3 =		<u>30</u>																																							
FACU species	<u>0</u>		x 4 =		<u>0</u>																																							
UPL species	<u>0</u>		x 5 =		<u>0</u>																																							
Column Totals	<u>90</u>	(A)			<u>175</u> (B)																																							
Prevalence Index = B/A =					<u>1.9</u>																																							
1. <i>Fraxinus pennsylvanica</i>	10	Yes	FACW																																									
2. <i>Carpinus caroliniana</i>	5	Yes	FAC																																									
3. _____																																												
4. _____																																												
5. _____																																												
6. _____																																												
7. _____																																												
<u>15</u> = Total Cover																																												
50% of total cover: <u>7.5</u> 20% of total cover: <u>3</u>																																												
<b>Sapling/Shrub Stratum (Plot size: <u>15</u>)</b>																																												
1. <i>Fraxinus pennsylvanica</i>	15	Yes	FACW																																									
2. <i>Lindera benzoin</i>	5	Yes	FAC																																									
3. _____																																												
4. _____																																												
5. _____																																												
6. _____																																												
7. _____																																												
8. _____																																												
9. _____																																												
<u>20</u> = Total Cover																																												
50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																																												
<b>Herb Stratum (Plot size: <u>5</u>)</b>																																												
1. <i>Impatiens capensis</i>	30	Yes	FACW																																									
2. <i>Carex crinita</i>	15	Yes	OBL																																									
3. <i>Arisaema triphyllum</i>	10	No	FACW																																									
4. _____																																												
5. _____																																												
6. _____																																												
7. _____																																												
8. _____																																												
9. _____																																												
10. _____																																												
11. _____																																												
<u>55</u> = Total Cover																																												
50% of total cover: <u>27.5</u> 20% of total cover: <u>11</u>																																												
<b>Woody Vine Stratum (Plot size: <u>15</u>)</b>																																												
1. _____																																												
2. _____																																												
3. _____																																												
4. _____																																												
5. _____																																												
<u>0</u> = Total Cover																																												
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																												
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>  A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).																																												

SOIL

Sampling Point: W-B18-103\_PEM-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 5	10YR 2/1	100					Mucky Sandy Loam	
5 - 12	10YR 5/1	100					Loamy Sand	
<sup>1</sup> Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup> Location: PL = Pore Lining, M = Matrix.								
<b>Hydric Soil Indicators:</b>						<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) (LRR N) <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136) <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)			<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)		
<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____			Bedrock 12			<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b>          A positive indication of hydric soil was observed.								

Photo of Sample Plot  
North



Photo of Sample Plot  
East



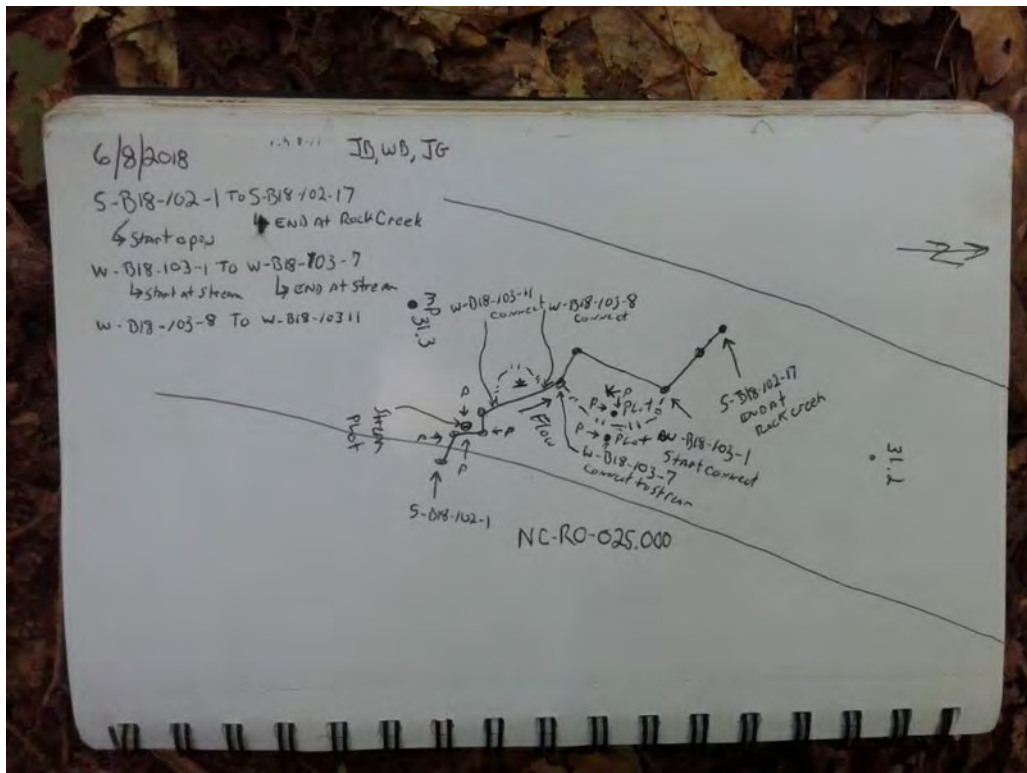
Photo of Sample Plot  
South



Photo of Sample Plot  
West



Photo of Sample Plot  
Sketch



A19 ext north



A19 ext, east



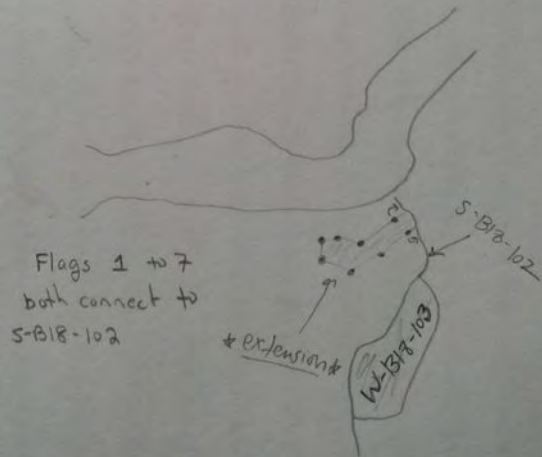
A19 ext, west

1/9/19 SLK, LAG

NC-RD-025.000

W-B18-103

\* this is a state requested  
added feature & is not  
on the current corridor



**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: MVP Southgate City/County: Burlington, Alamance Sampling Date: 2018-June-13  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-B18-115\_PFO-1  
 Investigator(s): Joseph Roy, Jim Bolduc, Jeremy Hummel 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: 36.1462138 Long: -79.4188285 Datum: WGS84  
 Soil Map Unit Name: Louisburg coarse sandy loam, 15 to 45 percent slopes NWI classification: None  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:  Covertypes is PFO. Area is wetland, all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  	
Remarks:  The criterion for wetland hydrology is met.	



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

Sampling Point: W-B18-115\_PFO-1

	Absolute % Cover	Dominant Species?	Indicator Status																																	
<b>Tree Stratum (Plot size: <u>15</u>)</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 20%; text-align: center;">Total % Cover of:</th> <th style="width: 20%;"></th> <th style="width: 30%; text-align: center;">Multiply By:</th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 1 = <u>0</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>20</u></td> <td></td> <td style="text-align: center;">x 2 = <u>40</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>25</u></td> <td></td> <td style="text-align: center;">x 3 = <u>75</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 4 = <u>0</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;"><u>45</u></td> <td style="text-align: center;">(A)</td> <td style="text-align: center;"><u>115</u> (B)</td> </tr> <tr> <td colspan="4" style="text-align: center;">Prevalence Index = B/A = <u>2.6</u></td> </tr> </tbody> </table> <b>Hydrophytic Vegetation Indicators:</b> ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 <sup>1</sup> ___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic		Total % Cover of:		Multiply By:	OBL species	<u>0</u>		x 1 = <u>0</u>	FACW species	<u>20</u>		x 2 = <u>40</u>	FAC species	<u>25</u>		x 3 = <u>75</u>	FACU species	<u>0</u>		x 4 = <u>0</u>	UPL species	<u>0</u>		x 5 = <u>0</u>	Column Totals	<u>45</u>	(A)	<u>115</u> (B)	Prevalence Index = B/A = <u>2.6</u>			
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Column Totals	<u>45</u>	(A)	<u>115</u> (B)																																	
Prevalence Index = B/A = <u>2.6</u>																																				
1. <i>Fraxinus pennsylvanica</i>	10	Yes	FACW																																	
2. <i>Carpinus caroliniana</i>	10	Yes	FAC																																	
3. <i>Fraxinus pennsylvanica</i>																																				
4. _____																																				
5. _____																																				
6. _____																																				
7. _____																																				
<u>20</u> = Total Cover																																				
50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																																				
<b>Sapling/Shrub Stratum (Plot size: <u>15</u>)</b>																																				
1. <i>Acer rubrum</i>	15	Yes	FAC																																	
2. _____																																				
3. _____																																				
4. _____																																				
5. _____																																				
6. _____																																				
7. _____																																				
8. _____																																				
9. _____																																				
<u>15</u> = Total Cover																																				
50% of total cover: <u>7.5</u> 20% of total cover: <u>3</u>																																				
<b>Herb Stratum (Plot size: <u>5</u>)</b>																																				
1. <i>Woodwardia areolata</i>	5	Yes	FACW																																	
2. <i>Viola cucullata</i>	5	Yes	FACW																																	
3. _____																																				
4. _____																																				
5. _____																																				
6. _____																																				
7. _____																																				
8. _____																																				
9. _____																																				
10. _____																																				
11. _____																																				
<u>10</u> = Total Cover																																				
50% of total cover: <u>5</u> 20% of total cover: <u>2</u>																																				
<b>Woody Vine Stratum (Plot size: <u>30</u>)</b>																																				
1. _____																																				
2. _____																																				
3. _____																																				
4. _____																																				
5. _____																																				
<u>0</u> = Total Cover																																				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																				
<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																																				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																																				
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>  A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).																																				



Photo of Sample Plot  
North



extension

Photo of Sample Plot  
East



extension

Photo of Sample Plot  
South



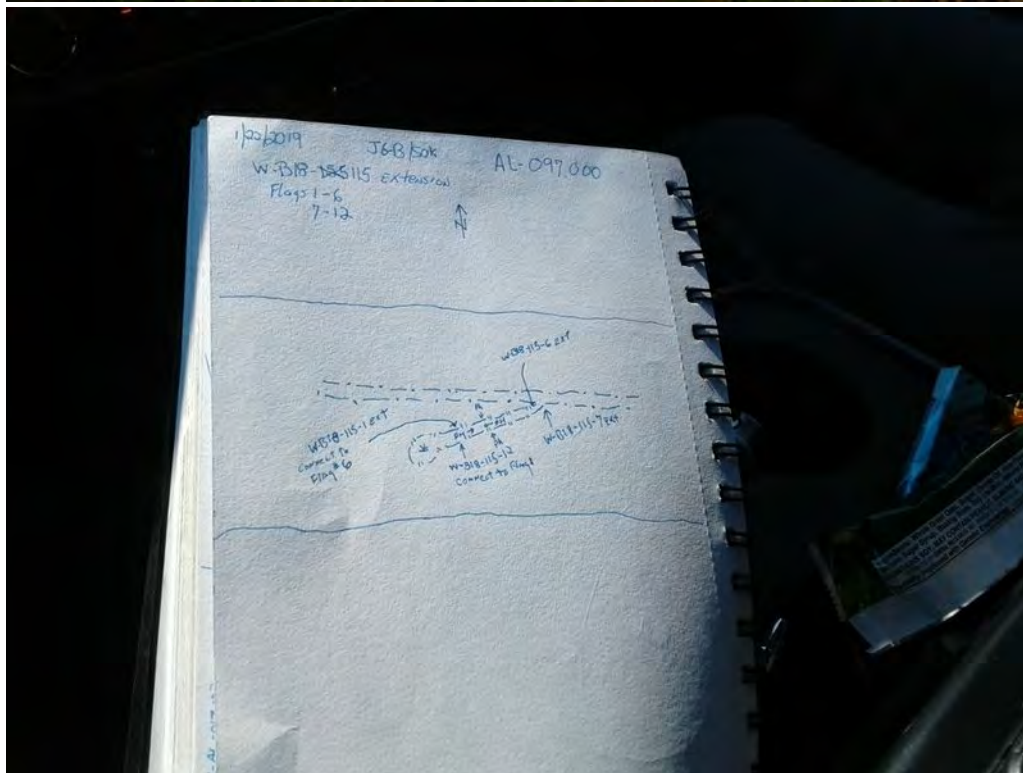
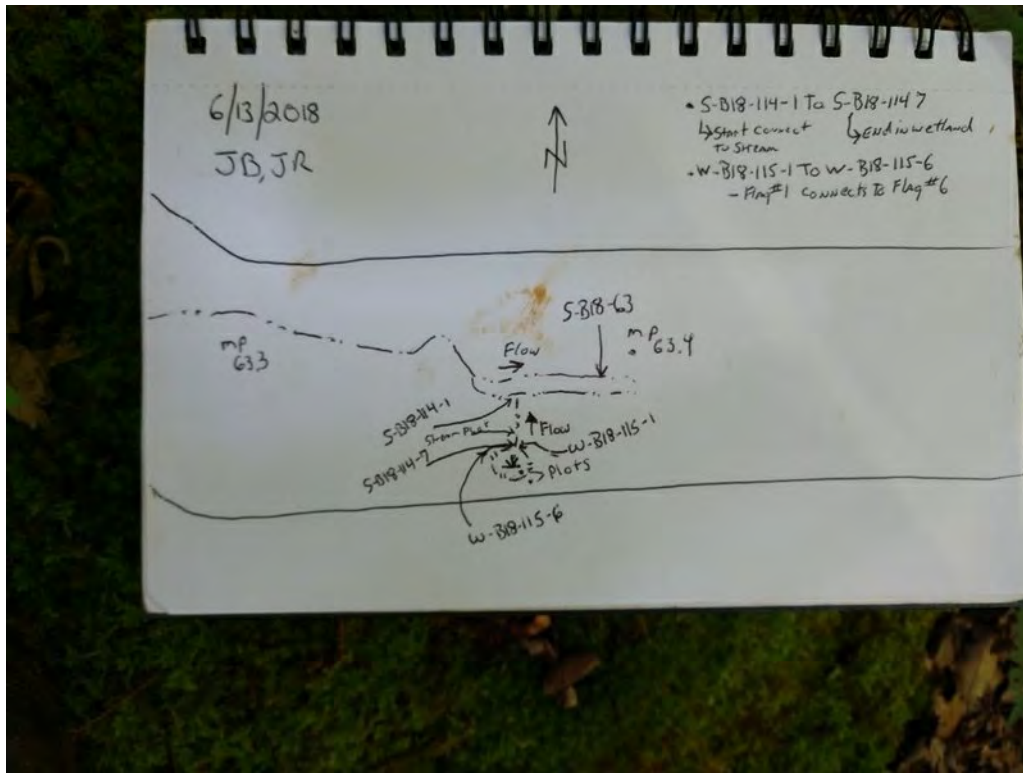
extension

Photo of Sample Plot  
West



extenssion

Photo of Sample Plot Sketch



**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: MVP Southgate City/County: Haw River, Alamance ... Sampling Date: 2019-Jan-08  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-B19-146\_PFO-1  
 Investigator(s): Simon King, Joe Roy, Susan Thebert Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Concave Slope (%): 1 to 3  
 Subregion (LRR or MLRA): Lat: 36.0908834 Long: -79.3623287 Datum: WGS84  
 Soil Map Unit Name: Enon sandy loam, 10 to 15 percent slopes NWI classification: PFO  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes \_\_\_ No  (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_, Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_ No   
 Are Vegetation \_\_\_\_, Soil \_\_\_\_, or Hydrology \_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No ___	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No ___
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No ___	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No ___	
Remarks:  Covertype is PFO. 6 foot bank may contribute drainage.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>			<u>Secondary Indicators (minimum of two required)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)			
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)			
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)			
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)			
		<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b> Surface Water Present? Yes ___ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No ___ Depth (inches): <u>5</u> Saturation Present? Yes ___ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)			Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No ___		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  _____ _____					
Remarks:  _____ _____					



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

Sampling Point: W-B19-146\_PFO-1

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator	Status
1. <i>Liquidambar styraciflua</i>	20	Yes	FAC	
2. <i>Acer negundo</i>	5	No	FAC	
3. <i>Juniperus virginiana</i>	3	No	FACU	
4. <i>Platanus occidentalis</i>	1	No	FACW	
5. _____				
6. _____				
7. _____				
	29	= Total Cover		
50% of total cover: <u>14.5</u>	20% of total cover: <u>5.8000000000000001</u>			
<u>Sapling/Shrub Stratum</u> (Plot size: _____)				
1. <i>Ligustrum sinense</i>	3	No	FACU	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
	3	= Total Cover		
50% of total cover: <u>1.5</u>	20% of total cover: <u>0.6000000000000001</u>			
<u>Herb Stratum</u> (Plot size: _____)				
1. <i>Microstegium vimineum</i>	50	Yes	FAC	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
	50	= Total Cover		
50% of total cover: <u>25</u>	20% of total cover: <u>10</u>			
<u>Woody Vine Stratum</u> (Plot size: _____)				
1. <i>Lonicera japonica</i>	2	No	FACU	
2. _____				
3. _____				
4. _____				
5. _____				
	2	= Total Cover		
50% of total cover: <u>1</u>	20% of total cover: <u>0.4</u>			

**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:**

	<u>Total % Cover of:</u>		<u>Multiply By:</u>
OBL species	<u>0</u>	x 1 =	<u>0</u>
FACW species	<u>1</u>	x 2 =	<u>2</u>
FAC species	<u>75</u>	x 3 =	<u>225</u>
FACU species	<u>8</u>	x 4 =	<u>32</u>
UPL species	<u>0</u>	x 5 =	<u>0</u>
Column Totals	<u>84</u>	(A)	<u>259</u> (B)
Prevalence Index = B/A = <u>3.1</u>			

**Hydrophytic Vegetation Indicators:**

\_\_\_\_ 1- Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

\_\_\_\_ 3 - Prevalence Index is ≤ 3.0<sup>1</sup>

4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

\_\_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Definitions of Four Vegetation Strata:**

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

**Sapling/shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 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.)



Photo of Sample Plot  
North



Photo of Sample Plot  
East



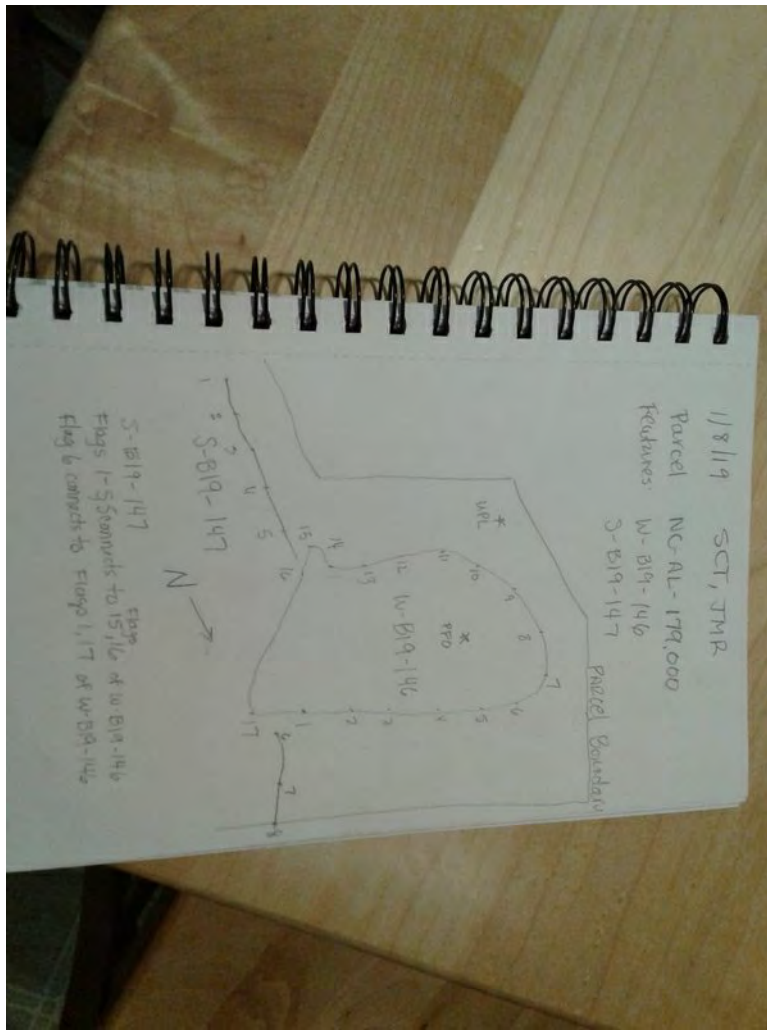
Photo of Sample Plot  
South



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: Haw River, Alamance ... Sampling Date: 2019-Jan-08  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-B19-146\_UPL-2  
 Investigator(s): Simon King, Joe Roy, Susan Thebert Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 1 to 10  
 Subregion (LRR or MLRA): Lat: 36.0910489 Long: -79.36243 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:  Covertypes is UPL.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>			<u>Secondary Indicators (minimum of two required)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)			
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)			
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)			
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)			
		<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>					
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____			
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____			
(includes capillary fringe)					
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-B19-146 UPL-2

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>																
1. <i>Juniperus virginiana</i>	15	Yes	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: <span style="float: right; text-align: right;">1 (A)</span>																
2. <i>Liquidambar styraciflua</i>	5	Yes	FAC	Total Number of Dominant Species Across All Strata: <span style="float: right; text-align: right;">3 (B)</span>																
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <span style="float: right; text-align: right;">33.3 (A/B)</span>																
4. _____																				
5. _____																				
6. _____																				
7. _____																				
_____ = Total Cover																				
50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																				
<b>Sapling/Shrub Stratum</b> (Plot size: _____)																				
1. _____																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
_____ = Total Cover																				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																				
<b>Herb Stratum</b> (Plot size: _____)																				
1. <i>Allium canadense</i>	2	No	FACU																	
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
_____ = Total Cover																				
50% of total cover: <u>1</u> 20% of total cover: <u>0.4</u>																				
<b>Woody Vine Stratum</b> (Plot size: _____)																				
1. <i>Hedera helix</i>	50	Yes	FACU																	
2. <i>Lonicera japonica</i>	10	No	FACU																	
3. _____																				
4. _____																				
5. _____																				
_____ = Total Cover																				
50% of total cover: <u>30</u> 20% of total cover: <u>12</u>																				
				<b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;"><u>Total % Cover of:</u></th> <th style="width: 50%;"><u>Multiply By:</u></th> </tr> </thead> <tbody> <tr> <td>OBL species <span style="float: right; text-align: right;">0</span></td> <td>x 1 = <span style="float: right; text-align: right;">0</span></td> </tr> <tr> <td>FACW species <span style="float: right; text-align: right;">0</span></td> <td>x 2 = <span style="float: right; text-align: right;">0</span></td> </tr> <tr> <td>FAC species <span style="float: right; text-align: right;">5</span></td> <td>x 3 = <span style="float: right; text-align: right;">15</span></td> </tr> <tr> <td>FACU species <span style="float: right; text-align: right;">77</span></td> <td>x 4 = <span style="float: right; text-align: right;">308</span></td> </tr> <tr> <td>UPL species <span style="float: right; text-align: right;">0</span></td> <td>x 5 = <span style="float: right; text-align: right;">0</span></td> </tr> <tr> <td>Column Totals <span style="float: right; text-align: right;">82</span></td> <td>(A) <span style="float: right; text-align: right;">323</span> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <span style="float: right; text-align: right;">3.9</span></td> </tr> </tbody> </table>	<u>Total % Cover of:</u>	<u>Multiply By:</u>	OBL species <span style="float: right; text-align: right;">0</span>	x 1 = <span style="float: right; text-align: right;">0</span>	FACW species <span style="float: right; text-align: right;">0</span>	x 2 = <span style="float: right; text-align: right;">0</span>	FAC species <span style="float: right; text-align: right;">5</span>	x 3 = <span style="float: right; text-align: right;">15</span>	FACU species <span style="float: right; text-align: right;">77</span>	x 4 = <span style="float: right; text-align: right;">308</span>	UPL species <span style="float: right; text-align: right;">0</span>	x 5 = <span style="float: right; text-align: right;">0</span>	Column Totals <span style="float: right; text-align: right;">82</span>	(A) <span style="float: right; text-align: right;">323</span> (B)	Prevalence Index = B/A = <span style="float: right; text-align: right;">3.9</span>	
<u>Total % Cover of:</u>	<u>Multiply By:</u>																			
OBL species <span style="float: right; text-align: right;">0</span>	x 1 = <span style="float: right; text-align: right;">0</span>																			
FACW species <span style="float: right; text-align: right;">0</span>	x 2 = <span style="float: right; text-align: right;">0</span>																			
FAC species <span style="float: right; text-align: right;">5</span>	x 3 = <span style="float: right; text-align: right;">15</span>																			
FACU species <span style="float: right; text-align: right;">77</span>	x 4 = <span style="float: right; text-align: right;">308</span>																			
UPL species <span style="float: right; text-align: right;">0</span>	x 5 = <span style="float: right; text-align: right;">0</span>																			
Column Totals <span style="float: right; text-align: right;">82</span>	(A) <span style="float: right; text-align: right;">323</span> (B)																			
Prevalence Index = B/A = <span style="float: right; text-align: right;">3.9</span>																				
				<b>Hydrophytic Vegetation Indicators:</b> _____ 1- Rapid Test for Hydrophytic Vegetation _____ 2 - Dominance Test is > 50% _____ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup> _____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic																
				<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																
				<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>     																				





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: Eden, Rockingham Co... Sampling Date: 2019-Jan-17  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-282\_UPL-1  
 Investigator(s): Simon King, Laura Giese Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Back slope Local relief (concave, convex, none): Convex Slope (%): 5 to 10  
 Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.5291138 Long: -79.6518838 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 <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes ___ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes ___ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes ___ No <input checked="" type="checkbox"/>	
Remarks:		
Covertypes is UPL.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one is required; check all that apply)</b> ___ Surface Water (A1)      ___ True Aquatic Plants (B14) ___ High Water Table (A2)      ___ Hydrogen Sulfide Odor (C1) ___ Saturation (A3)      ___ Oxidized Rhizospheres on Living Roots (C3) ___ Water Marks (B1)      ___ Presence of Reduced Iron (C4) ___ Sediment Deposits (B2)      ___ Recent Iron Reduction in Tilled Soils (C6) ___ Drift Deposits (B3)      ___ Thin Muck Surface (C7) ___ Algal Mat or Crust (B4)      ___ Other (Explain in Remarks) ___ Iron Deposits (B5) ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9) ___ Aquatic Fauna (B13)	<b>Secondary Indicators (minimum of two required)</b> ___ 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)
<b>Field Observations:</b> Surface Water Present? Yes ___ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes ___ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes ___ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes ___ No <input checked="" type="checkbox"/>
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-A19-282\_UPL-1

	Absolute % Cover	Dominant Species?	Indicator Status																																									
<b>Tree Stratum (Plot size: <u>30</u>)</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 20%; text-align: center;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 20%; text-align: center;">Multiply By:</th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;"><u>0</u></td> <td>x 1 =</td> <td style="text-align: center;"><u>0</u></td> <td></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>0</u></td> <td>x 2 =</td> <td style="text-align: center;"><u>0</u></td> <td></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>5</u></td> <td>x 3 =</td> <td style="text-align: center;"><u>15</u></td> <td></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>70</u></td> <td>x 4 =</td> <td style="text-align: center;"><u>280</u></td> <td></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td>x 5 =</td> <td style="text-align: center;"><u>0</u></td> <td></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;"><u>75</u></td> <td>(A)</td> <td style="text-align: center;"><u>295</u></td> <td>(B)</td> </tr> <tr> <td colspan="5" style="text-align: center;">Prevalence Index = B/A = <u>3.9</u></td> </tr> </tbody> </table> <b>Hydrophytic Vegetation Indicators:</b> ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is > 50% ___ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup> ___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic  <b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.		Total % Cover of:		Multiply By:		OBL species	<u>0</u>	x 1 =	<u>0</u>		FACW species	<u>0</u>	x 2 =	<u>0</u>		FAC species	<u>5</u>	x 3 =	<u>15</u>		FACU species	<u>70</u>	x 4 =	<u>280</u>		UPL species	<u>0</u>	x 5 =	<u>0</u>		Column Totals	<u>75</u>	(A)	<u>295</u>	(B)	Prevalence Index = B/A = <u>3.9</u>				
	Total % Cover of:		Multiply By:																																									
OBL species	<u>0</u>	x 1 =	<u>0</u>																																									
FACW species	<u>0</u>	x 2 =	<u>0</u>																																									
FAC species	<u>5</u>	x 3 =	<u>15</u>																																									
FACU species	<u>70</u>	x 4 =	<u>280</u>																																									
UPL species	<u>0</u>	x 5 =	<u>0</u>																																									
Column Totals	<u>75</u>	(A)	<u>295</u>		(B)																																							
Prevalence Index = B/A = <u>3.9</u>																																												
1. <i>Pinus taeda</i>	5	Yes	FAC																																									
2. _____																																												
3. _____																																												
4. _____																																												
5. _____																																												
6. _____																																												
7. _____																																												
5 = Total Cover																																												
50% of total cover: <u>2.5</u> 20% of total cover: <u>1</u>																																												
<b>Sapling/Shrub Stratum (Plot size: <u>15'</u>)</b>																																												
1. <i>Rubus allegheniensis</i>	20	Yes	FACU																																									
2. _____																																												
3. _____																																												
4. _____																																												
5. _____																																												
6. _____																																												
7. _____																																												
8. _____																																												
9. _____																																												
20 = Total Cover																																												
50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																																												
<b>Herb Stratum (Plot size: <u>5</u>)</b>																																												
1. <i>Solidago canadensis</i>	50	Yes	FACU																																									
2. _____																																												
3. _____																																												
4. _____																																												
5. _____																																												
6. _____																																												
7. _____																																												
8. _____																																												
9. _____																																												
10. _____																																												
11. _____																																												
50 = Total Cover																																												
50% of total cover: <u>25</u> 20% of total cover: <u>10</u>																																												
<b>Woody Vine Stratum (Plot size: <u>30'</u>)</b>																																												
1. _____																																												
2. _____																																												
3. _____																																												
4. _____																																												
5. _____																																												
0 = Total Cover																																												
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																												
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>  No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC– or drier).																																												



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: Gibsonville, Caswell C... Sampling Date: 2019-Jan-18  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-284\_PEM-1  
 Investigator(s): Laura Giese, Tony Tredway Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Back slope Local relief (concave, convex, none): Concave Slope (%): 5 to 10  
 Subregion (LRR or MLRA): Lat: 36.258826 Long: -79.546354 Datum: WGS84  
 Soil Map Unit Name: Mecklenburg sandy clay loam, 2 to 8 percent slopes, moderately eroded NWI classification: None  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:  Covertypes is PEM. Area is wetland, all three wetland parameters are present. power line ROW construction.		

**HYDROLOGY**

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

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

Sampling Point: W-A19-284 PEM-1

	Absolute % Cover	Dominant Species?	Indicator Status																																									
<b>Tree Stratum (Plot size: <u>30</u>)</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 20%; text-align: center;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 20%; text-align: center;">Multiply By:</th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;"><u>15</u></td> <td></td> <td style="text-align: center;">x 1 =</td> <td style="text-align: center;"><u>15</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>40</u></td> <td></td> <td style="text-align: center;">x 2 =</td> <td style="text-align: center;"><u>80</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>35</u></td> <td></td> <td style="text-align: center;">x 3 =</td> <td style="text-align: center;"><u>105</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 4 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 5 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;"><u>90</u></td> <td style="text-align: center;">(A)</td> <td></td> <td style="text-align: center;"><u>200</u> (B)</td> </tr> <tr> <td colspan="4" style="text-align: right;">Prevalence Index = B/A =</td> <td style="text-align: center;"><u>2.2</u></td> </tr> </tbody> </table>		Total % Cover of:		Multiply By:		OBL species	<u>15</u>		x 1 =	<u>15</u>	FACW species	<u>40</u>		x 2 =	<u>80</u>	FAC species	<u>35</u>		x 3 =	<u>105</u>	FACU species	<u>0</u>		x 4 =	<u>0</u>	UPL species	<u>0</u>		x 5 =	<u>0</u>	Column Totals	<u>90</u>	(A)		<u>200</u> (B)	Prevalence Index = B/A =				<u>2.2</u>
	Total % Cover of:		Multiply By:																																									
OBL species	<u>15</u>		x 1 =		<u>15</u>																																							
FACW species	<u>40</u>		x 2 =		<u>80</u>																																							
FAC species	<u>35</u>		x 3 =		<u>105</u>																																							
FACU species	<u>0</u>		x 4 =		<u>0</u>																																							
UPL species	<u>0</u>		x 5 =		<u>0</u>																																							
Column Totals	<u>90</u>	(A)			<u>200</u> (B)																																							
Prevalence Index = B/A =					<u>2.2</u>																																							
1. _____	_____	_____	_____																																									
2. _____	_____	_____	_____																																									
3. _____	_____	_____	_____																																									
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5. _____	_____	_____	_____																																									
6. _____	_____	_____	_____																																									
7. _____	_____	_____	_____																																									
<u>0</u> = Total Cover																																												
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																												
<b>Sapling/Shrub Stratum (Plot size: <u>15</u>)</b>																																												
1. _____	_____	_____	_____																																									
2. _____	_____	_____	_____																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
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7. _____	_____	_____	_____																																									
8. _____	_____	_____	_____																																									
9. _____	_____	_____	_____																																									
<u>0</u> = Total Cover																																												
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																												
<b>Herb Stratum (Plot size: <u>5' radius</u>)</b>																																												
1. <u><i>Bidens frondosa</i></u>	<u>20</u>	Yes	FACW																																									
2. <u><i>Microstegium vimineum</i></u>	<u>20</u>	Yes	FAC																																									
3. <u><i>Scirpus atrovirens</i></u>	<u>15</u>	Yes	OBL																																									
4. <u><i>Vernonia fasciculata</i></u>	<u>10</u>	No	FAC																																									
5. <u><i>Ludwigia alternifolia</i></u>	<u>10</u>	No	FACW																																									
6. <u><i>Juncus effusus</i></u>	<u>10</u>	No	FACW																																									
7. <u><i>Smilax rotundifolia</i></u>	<u>5</u>	No	FAC																																									
8. _____	_____	_____	_____																																									
9. _____	_____	_____	_____																																									
10. _____	_____	_____	_____																																									
11. _____	_____	_____	_____																																									
<u>90</u> = Total Cover																																												
50% of total cover: <u>45</u> 20% of total cover: <u>18</u>																																												
<b>Woody Vine Stratum (Plot size: <u>    </u>)</b>																																												
1. _____	_____	_____	_____																																									
2. _____	_____	_____	_____																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
5. _____	_____	_____	_____																																									
<u>0</u> = Total Cover																																												
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																												
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>          				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																																								





Photo of Sample Plot  
North



Photo of Sample Plot  
East



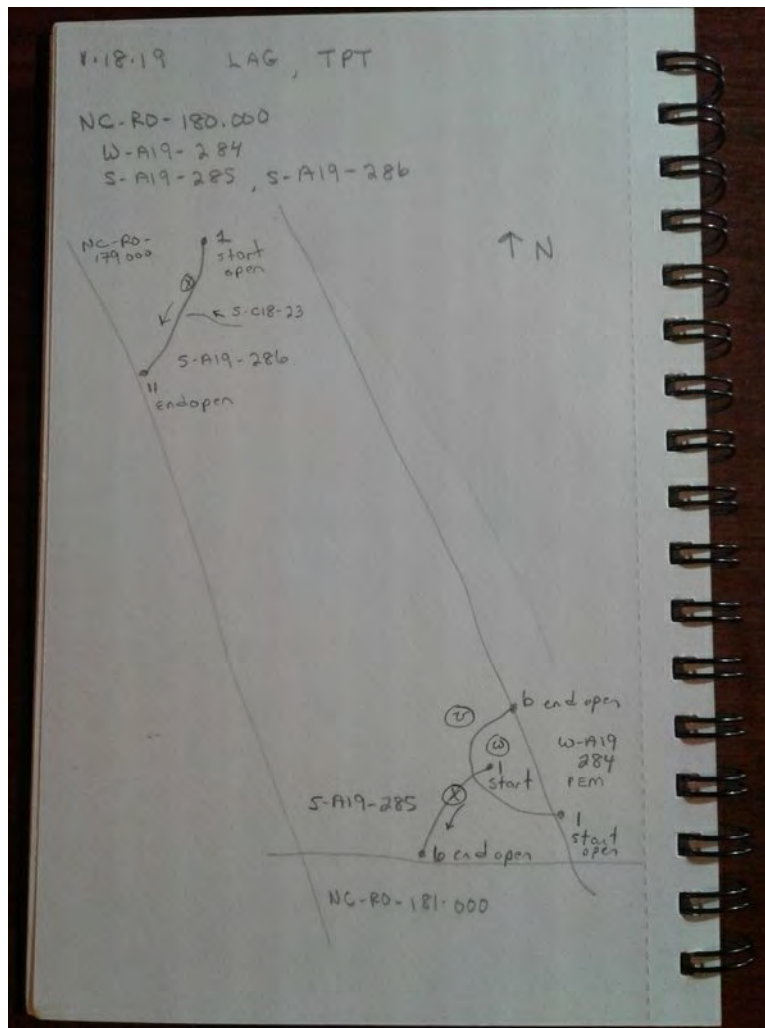
Photo of Sample Plot  
South



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: Gibsonville, Caswell C... Sampling Date: 2019-Jan-18  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-284\_UPL-1  
 Investigator(s): Laura Giese, Tony Tredway, Nate Renaudin Section, Township, Range: FIX location  
 Landform (hillslope, terrace, etc.): Back slope Local relief (concave, convex, none): Convex Slope (%): 5 to 10  
 Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.258868 Long: -79.546497 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 <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes ___ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes ___ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes ___ No <input checked="" type="checkbox"/>	
Remarks:		
Covertypes is UPL. Area is upland, not all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
___ 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)	___ 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)
<b>Field Observations:</b>		
Surface Water Present? Yes ___ No <input checked="" type="checkbox"/> Water Table Present? Yes ___ No <input checked="" type="checkbox"/> Saturation Present? Yes ___ No <input checked="" type="checkbox"/> (includes capillary fringe)	Depth (inches): _____ Depth (inches): _____ Depth (inches): _____	<b>Wetland Hydrology Present?</b> Yes ___ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

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

Sampling Point: W-A19-284 UPL-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	2 (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	6 (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	33.3 (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>	
5. _____	_____	_____	_____	<u>Total % Cover of:</u>	<u>Multiply By:</u>
6. _____	_____	_____	_____	OBL species	0 x 1 = 0
7. _____	_____	_____	_____	FACW species	0 x 2 = 0
	0 = Total Cover			FAC species	15 x 3 = 45
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>		FACU species	70 x 4 = 280
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				UPL species	0 x 5 = 0
1. <i>Liquidambar styraciflua</i>	5	Yes	FAC	Column Totals	85 (A) 325 (B)
2. <i>Acer rubrum</i>	5	Yes	FAC	Prevalence Index = B/A = <u>3.8</u>	
3. <i>Liriodendron tulipifera</i>	5	Yes	FACU	<b>Hydrophytic Vegetation Indicators:</b>	
4. _____	_____	_____	_____	____ 1 - Rapid Test for Hydrophytic Vegetation	
5. _____	_____	_____	_____	____ 2 - Dominance Test is > 50%	
6. _____	_____	_____	_____	____ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>	
7. _____	_____	_____	_____	____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
8. _____	_____	_____	_____	____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
9. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
	15 = Total Cover			<b>Definitions of Four Vegetation Strata:</b>	
	50% of total cover: <u>7.5</u>	20% of total cover: <u>3</u>		<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
<b>Herb Stratum</b> (Plot size: <u>5' radius</u> )				<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
1. <i>Solidago canadensis</i>	20	Yes	FACU	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
2. <i>Rubus allegheniensis</i>	20	Yes	FACU	<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
3. <i>Lonicera japonica</i>	15	Yes	FACU	<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
4. <i>Allium vineale</i>	10	No	FACU		
5. <i>Dichanthelium clandestinum</i>	5	No	FAC		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
	70 = Total Cover				
	50% of total cover: <u>35</u>	20% of total cover: <u>14</u>			
<b>Woody Vine Stratum</b> (Plot size: <u>30</u> )					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
	0 = Total Cover				
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>			
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>					
No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC– or drier).					

SOIL

Sampling Point: W-A19-284 UPL-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 1	10YR 3/2	100					Silt Loam	
1 - 16	7.5YR 4/6	100					Silt Loam	
16 - 20	7.5YR 5/6	100					Silt Loam	mn depletion

<sup>1</sup>Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains.    <sup>2</sup>Location: PL = Pore Lining, M = Matrix.

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

<b>Restrictive Layer (if observed):</b>		<b>Hydric Soil Present?</b>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Type:	None		
Depth (inches):			

**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: Reidsville, Rockingham... Sampling Date: 2019-Jan-18  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-287\_PEM-1  
 Investigator(s): Laura Giese, Tony Tredway 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: 36.3413962 Long: -79.6061698 Datum: WGS84  
 Soil Map Unit Name: Siloam sandy loam, 10 to 45 percent slopes NWI classification:  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
<b>Remarks:</b>		
Covertypes is PEM. Area is wetland, all three wetland parameters are present. Area likely disturbed from past land use .		

**HYDROLOGY**

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

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

Sampling Point: W-A19-287 PEM-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	2 (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	2 (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	100 (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>	
5. _____	_____	_____	_____	<u>Total % Cover of:</u>	<u>Multiply By:</u>
6. _____	_____	_____	_____	OBL species	5 x 1 = 5
7. _____	_____	_____	_____	FACW species	40 x 2 = 80
	0 = Total Cover			FAC species	25 x 3 = 75
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>		FACU species	5 x 4 = 20
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				UPL species	0 x 5 = 0
1. _____	_____	_____	_____	Column Totals	75 (A) 180 (B)
2. _____	_____	_____	_____	Prevalence Index = B/A = <u>2.4</u>	
3. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b>	
4. _____	_____	_____	_____	___ 1 - Rapid Test for Hydrophytic Vegetation	
5. _____	_____	_____	_____	<input checked="" type="checkbox"/> 2 - Dominance Test is >50%	
6. _____	_____	_____	_____	<input checked="" type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>	
7. _____	_____	_____	_____	___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
8. _____	_____	_____	_____	___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
9. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
	0 = Total Cover			<b>Definitions of Four Vegetation Strata:</b>	
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>		<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
<b>Herb Stratum</b> (Plot size: <u>5</u> )				<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
1. <u>Juncus effusus</u>	25	Yes	FACW	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
2. <u>Microstegium vimineum</u>	25	Yes	FAC	<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
3. <u>Asteraceae</u>	10	No	NI		
4. <u>Solidago gigantea</u>	10	No	FACW		
5. <u>Eupatorium perfoliatum</u>	5	No	FACW		
6. <u>Mimulus ringens</u>	5	No	OBL		
7. <u>Andropogon virginicus</u>	5	No	FACU		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
	85 = Total Cover				
	50% of total cover: <u>42.5</u>	20% of total cover: <u>17</u>			
<b>Woody Vine Stratum</b> (Plot size: <u>30</u> )					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
	0 = Total Cover				
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>			
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>					
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).					



Photo of Sample Plot  
North



Photo of Sample Plot  
East



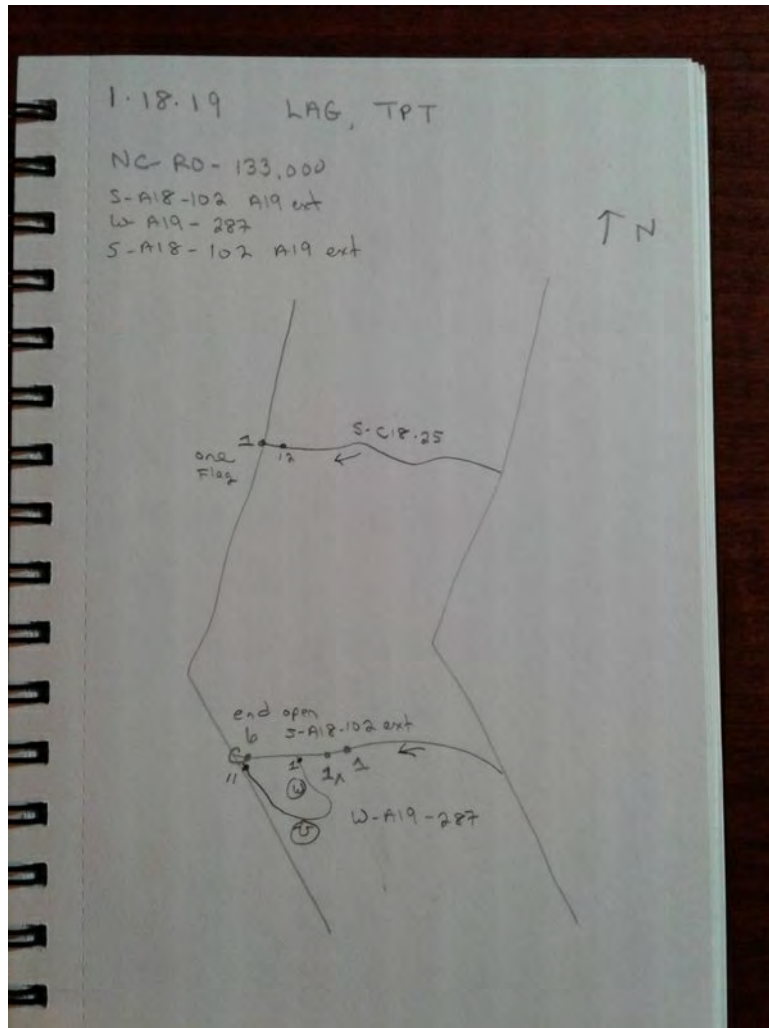
Photo of Sample Plot  
South



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: Reidsville, Rockingham... Sampling Date: 2019-Jan-18  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-287\_UPL-1  
 Investigator(s): Laura Giese, Tony Tredway Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Back slope Local relief (concave, convex, none): Convex Slope (%): 10 to 15  
 Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.3414553 Long: -79.6060037 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:		
Covertypes is UPL. Area is upland, not all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (includes capillary fringe)	Depth (inches): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		
The criterion for wetland hydrology is not met. No positive indication of wetland hydrology was observed.		



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

Sampling Point: W-A19-287 UPL-1

	Absolute % Cover	Dominant Species?	Indicator Status																																																	
<b>Tree Stratum (Plot size: <u>30</u>)</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 20%; text-align: center;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 10%; text-align: center;">Multiply By:</th> <th style="width: 10%;"></th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 1 =</td> <td style="text-align: center;"><u>0</u></td> <td></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 2 =</td> <td style="text-align: center;"><u>0</u></td> <td></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>15</u></td> <td></td> <td style="text-align: center;">x 3 =</td> <td style="text-align: center;"><u>45</u></td> <td></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>50</u></td> <td></td> <td style="text-align: center;">x 4 =</td> <td style="text-align: center;"><u>200</u></td> <td></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>15</u></td> <td></td> <td style="text-align: center;">x 5 =</td> <td style="text-align: center;"><u>75</u></td> <td></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;"><u>80</u></td> <td></td> <td style="text-align: center;">(A)</td> <td style="text-align: center;"><u>320</u></td> <td style="text-align: center;">(B)</td> </tr> <tr> <td colspan="4" style="text-align: right;">Prevalence Index = B/A =</td> <td style="text-align: center;"><u>4</u></td> <td></td> </tr> </tbody> </table>		Total % Cover of:		Multiply By:			OBL species	<u>0</u>		x 1 =	<u>0</u>		FACW species	<u>0</u>		x 2 =	<u>0</u>		FAC species	<u>15</u>		x 3 =	<u>45</u>		FACU species	<u>50</u>		x 4 =	<u>200</u>		UPL species	<u>15</u>		x 5 =	<u>75</u>		Column Totals	<u>80</u>		(A)	<u>320</u>	(B)	Prevalence Index = B/A =				<u>4</u>	
	Total % Cover of:		Multiply By:																																																	
OBL species	<u>0</u>		x 1 =		<u>0</u>																																															
FACW species	<u>0</u>		x 2 =		<u>0</u>																																															
FAC species	<u>15</u>		x 3 =		<u>45</u>																																															
FACU species	<u>50</u>		x 4 =		<u>200</u>																																															
UPL species	<u>15</u>		x 5 =		<u>75</u>																																															
Column Totals	<u>80</u>		(A)		<u>320</u>	(B)																																														
Prevalence Index = B/A =					<u>4</u>																																															
1. _____	_____	_____	_____																																																	
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<u>0</u> = Total Cover																																																				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																																				
<b>Sapling/Shrub Stratum (Plot size: <u>15</u>)</b>																																																				
1. _____	_____	_____	_____																																																	
2. _____	_____	_____	_____																																																	
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<u>0</u> = Total Cover																																																				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																																				
<b>Herb Stratum (Plot size: <u>5</u>)</b>																																																				
1. <i>Erigeron canadensis</i>	30	Yes	FACU																																																	
2. <i>Dichanthelium dichotomum</i>	15	Yes	FAC																																																	
3. <i>Stellaria media</i>	15	Yes	UPL																																																	
4. <i>Allium vineale</i>	10	No	FACU																																																	
5. <i>Rubus allegheniensis</i>	10	No	FACU																																																	
6. _____	_____	_____	_____																																																	
7. _____	_____	_____	_____																																																	
8. _____	_____	_____	_____																																																	
9. _____	_____	_____	_____																																																	
10. _____	_____	_____	_____																																																	
11. _____	_____	_____	_____																																																	
<u>80</u> = Total Cover																																																				
50% of total cover: <u>40</u> 20% of total cover: <u>16</u>																																																				
<b>Woody Vine Stratum (Plot size: <u>30</u>)</b>																																																				
1. _____	_____	_____	_____																																																	
2. _____	_____	_____	_____																																																	
3. _____	_____	_____	_____																																																	
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5. _____	_____	_____	_____																																																	
<u>0</u> = Total Cover																																																				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																																				
<b>Hydrophytic Vegetation Indicators:</b> ____ 1 - Rapid Test for Hydrophytic Vegetation ____ 2 - Dominance Test is > 50% ____ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup> ____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic																																																				
<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																																																				
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																																																				
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>  No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC– or drier).																																																				



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: Gibsonville, Rockingha... Sampling Date: 2019-Jan-19  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-288\_PEM-1  
 Investigator(s): Laura Giese, Tony Tredway, Jim Bolduc 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: 36.2634532 Long: -79.5508953 Datum: WGS84  
 Soil Map Unit Name: Pacolet sandy loam, 8 to 15 percent slopes NWI classification:  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:  Covertypes is PEM. Area is wetland, all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)  <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>20</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>20</u> (includes capillary fringe)	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  _____  _____	
Remarks:  The criterion for wetland hydrology is met.	

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

Sampling Point: W-A19-288 PEM-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	3 (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	3 (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	100 (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>	
5. _____	_____	_____	_____	<u>Total % Cover of:</u>	<u>Multiply By:</u>
6. _____	_____	_____	_____	OBL species	10 x 1 = 10
7. _____	_____	_____	_____	FACW species	65 x 2 = 130
	0 = Total Cover			FAC species	25 x 3 = 75
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>		FACU species	0 x 4 = 0
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				UPL species	0 x 5 = 0
1. <i>Carpinus caroliniana</i>	5	Yes	FAC	Column Totals	100 (A) 215 (B)
2. _____	_____	_____	_____	Prevalence Index = B/A = <u>2.2</u>	
3. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b>	
4. _____	_____	_____	_____	____ 1 - Rapid Test for Hydrophytic Vegetation	
5. _____	_____	_____	_____	✓ 2 - Dominance Test is >50%	
6. _____	_____	_____	_____	✓ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>	
7. _____	_____	_____	_____	____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
8. _____	_____	_____	_____	____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
9. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
	5 = Total Cover			<b>Definitions of Four Vegetation Strata:</b>	
	50% of total cover: <u>2.5</u>	20% of total cover: <u>1</u>		<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
<b>Herb Stratum</b> (Plot size: <u>5</u> )				<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
1. <i>Cyperaceae</i>	55	Yes	FACW	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
2. <i>Microstegium vimineum</i>	20	Yes	FAC	<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
3. <i>Impatiens capensis</i>	10	No	FACW		
4. <i>Persicaria sagittata</i>	10	No	OBL		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
	95 = Total Cover				
	50% of total cover: <u>47.5</u>	20% of total cover: <u>19</u>			
<b>Woody Vine Stratum</b> (Plot size: <u>30</u> )					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
	0 = Total Cover				
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>			
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>					
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). Trees are dead.					

SOIL

Sampling Point: W-A19-288 PEM-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 2	10YR 3/2	100					Silt Loam	
2 - 9	10YR 5/3	90	7.5YR 4/6	10	C	M	Silt Loam	
9 - 15	10YR 4/3	95	2.5Y 5/2	5	D	M	Sandy Loam	
15 - 23	10YR 5/6	95	10Y 6/1	5	D	M	Sandy Loam	
<sup>1</sup> Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup> Location: PL = Pore Lining, M = Matrix.								
<b>Hydric Soil Indicators:</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) (LRR N) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136) <input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148) <input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input checked="" type="checkbox"/> Other (Explain in Remarks)		
<b>Restrictive Layer (if observed):</b> Type: <u>None</u> Depth (inches): _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<b>Remarks:</b>          A positive indication of hydric soil was observed. The criterion for hydric soil is met.								

Soil Photos



right is top



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: Gibsonville, Rockingha... Sampling Date: 2019-Jan-19  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-A19-288\_UPL-1  
 Investigator(s): Laura Giese, Tony Tredway, Jim Bolduc 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: 36.2634267 Long: -79.5509923 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
<b>Remarks:</b>		
Covertypes is UPL. Area is upland, not all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	
(includes capillary fringe)		
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>		
<b>Remarks:</b>		
The criterion for wetland hydrology is not met. No positive indication of wetland hydrology was observed.		

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

Sampling Point: W-A19-288 UPL-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. <i>Liquidambar styraciflua</i>	10	Yes	FAC	Number of Dominant Species That Are OBL, FACW, or FAC:	2 (A)
2. <i>Fraxinus americana</i>	10	Yes	FACU	Total Number of Dominant Species Across All Strata:	3 (B)
3. <i>Carya glabra</i>	5	No	FACU	Percent of Dominant Species That Are OBL, FACW, or FAC:	66.7 (A/B)
4. <i>Betula nigra</i>	5	No	FACW		
5. <i>Carpinus caroliniana</i>	5	No	FAC		
6. _____					
7. _____					
	35 = Total Cover				
	50% of total cover: <u>17.5</u>	20% of total cover: <u>7</u>			
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u> )				<b>Prevalence Index worksheet:</b>	
1. _____				<b>Total % Cover of:</b>	<b>Multiply By:</b>
2. _____				OBL species	0 x 1 = 0
3. _____				FACW species	5 x 2 = 10
4. _____				FAC species	60 x 3 = 180
5. _____				FACU species	35 x 4 = 140
6. _____				UPL species	0 x 5 = 0
7. _____				Column Totals	100 (A) 330 (B)
8. _____				Prevalence Index = B/A = <u>3.3</u>	
9. _____					
	0 = Total Cover				
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>			
<u>Herb Stratum</u> (Plot size: <u>5</u> )				<b>Hydrophytic Vegetation Indicators:</b>	
1. <i>Microstegium vimineum</i>	45	Yes	FAC	____ 1 - Rapid Test for Hydrophytic Vegetation	
2. <i>Lonicera japonica</i>	10	No	FACU	<input checked="" type="checkbox"/> 2 - Dominance Test is >50%	
3. <i>Solidago canadensis</i>	10	No	FACU	____ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>	
4. _____				____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
5. _____				____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
6. _____				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
	65 = Total Cover				
	50% of total cover: <u>32.5</u>	20% of total cover: <u>13</u>			
<u>Woody Vine Stratum</u> (Plot size: <u>30</u> )				<b>Definitions of Four Vegetation Strata:</b>	
1. _____				<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
2. _____				<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
3. _____				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
4. _____				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
5. _____					
	0 = Total Cover				
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>			
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>  A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	



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: Burlington, Alamance Sampling Date: 2018-May-10  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-B18-5\_PFO-1  
 Investigator(s): James Bolduc, Tony Tredway, Karla Fortier Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 2 to 5  
 Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.1001062 Long: -79.3893178 Datum: WGS84  
 Soil Map Unit Name: Helena-Urban land complex, 2 to 6 percent slopes NWI classification: None  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:  Covertypes is PFO.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>			<u>Secondary Indicators (minimum of two required)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)			
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)			
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)			
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)			
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)			
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>					
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	6		
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	0		
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

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

Sampling Point: W-B18-5\_PFO-1

	Absolute % Cover	Dominant Species?	Indicator Status																																									
<b>Tree Stratum (Plot size: 30)</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>83.3</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 20%; text-align: center;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 20%; text-align: center;">Multiply By:</th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 1 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>120</u></td> <td></td> <td style="text-align: center;">x 2 =</td> <td style="text-align: center;"><u>240</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>90</u></td> <td></td> <td style="text-align: center;">x 3 =</td> <td style="text-align: center;"><u>270</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>30</u></td> <td></td> <td style="text-align: center;">x 4 =</td> <td style="text-align: center;"><u>120</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 5 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;"><u>240</u></td> <td style="text-align: center;">(A)</td> <td></td> <td style="text-align: center;"><u>630</u> (B)</td> </tr> <tr> <td colspan="4" style="text-align: right;">Prevalence Index = B/A =</td> <td style="text-align: center;"><u>2.6</u></td> </tr> </tbody> </table> <b>Hydrophytic Vegetation Indicators:</b> ___ 1- Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 <sup>1</sup> ___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic  <b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.   Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Total % Cover of:		Multiply By:		OBL species	<u>0</u>		x 1 =	<u>0</u>	FACW species	<u>120</u>		x 2 =	<u>240</u>	FAC species	<u>90</u>		x 3 =	<u>270</u>	FACU species	<u>30</u>		x 4 =	<u>120</u>	UPL species	<u>0</u>		x 5 =	<u>0</u>	Column Totals	<u>240</u>	(A)		<u>630</u> (B)	Prevalence Index = B/A =				<u>2.6</u>
	Total % Cover of:		Multiply By:																																									
OBL species	<u>0</u>		x 1 =		<u>0</u>																																							
FACW species	<u>120</u>		x 2 =		<u>240</u>																																							
FAC species	<u>90</u>		x 3 =		<u>270</u>																																							
FACU species	<u>30</u>		x 4 =		<u>120</u>																																							
UPL species	<u>0</u>		x 5 =		<u>0</u>																																							
Column Totals	<u>240</u>	(A)			<u>630</u> (B)																																							
Prevalence Index = B/A =					<u>2.6</u>																																							
1. <i>Fraxinus pennsylvanica</i>	30	Yes	FACW																																									
2. <i>Cornus florida</i>	20	Yes	FACU																																									
3. _____																																												
4. _____																																												
5. _____																																												
6. _____																																												
7. _____																																												
<u>50</u> = Total Cover																																												
50% of total cover: <u>25</u> 20% of total cover: <u>10</u>																																												
<b>Sapling/Shrub Stratum (Plot size: 15')</b>																																												
1. <i>Carpinus caroliniana</i>	40	Yes	FAC																																									
2. <i>Acer rubrum</i>	30	Yes	FAC																																									
3. <i>Cornus florida</i>	10	No	FACU																																									
4. _____																																												
5. _____																																												
6. _____																																												
7. _____																																												
8. _____																																												
9. _____																																												
<u>80</u> = Total Cover																																												
50% of total cover: <u>40</u> 20% of total cover: <u>16</u>																																												
<b>Herb Stratum (Plot size: 5')</b>																																												
1. <i>Leersia virginica</i>	90	Yes	FACW																																									
2. <i>Sambucus nigra</i>	10	No	FAC																																									
3. _____																																												
4. _____																																												
5. _____																																												
6. _____																																												
7. _____																																												
8. _____																																												
9. _____																																												
10. _____																																												
11. _____																																												
<u>100</u> = Total Cover																																												
50% of total cover: <u>50</u> 20% of total cover: <u>20</u>																																												
<b>Woody Vine Stratum (Plot size: 30')</b>																																												
1. <i>Toxicodendron radicans</i>	10	Yes	FAC																																									
2. _____																																												
3. _____																																												
4. _____																																												
5. _____																																												
<u>10</u> = Total Cover																																												
50% of total cover: <u>5</u> 20% of total cover: <u>2</u>																																												
Remarks: (Include photo numbers here or on a separate sheet.)																																												



Hydrology Photos



Vegetation Photos



Soil Photos



Photo of Sample Plot North



Photo of Sample Plot East



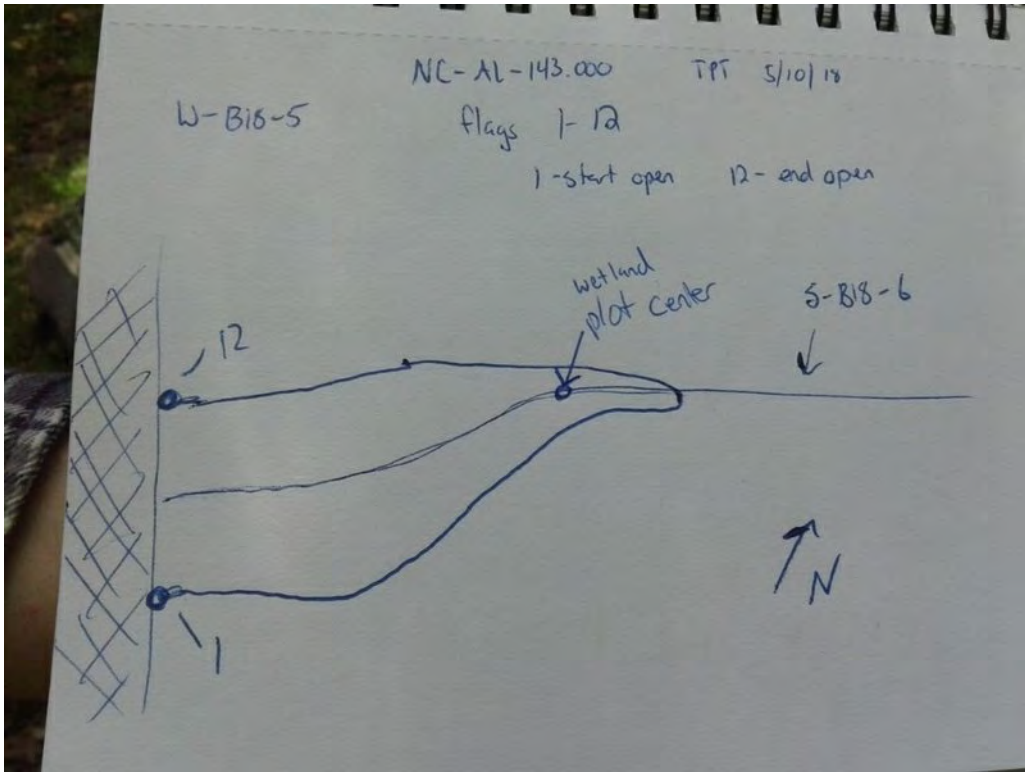
Photo of Sample Plot South



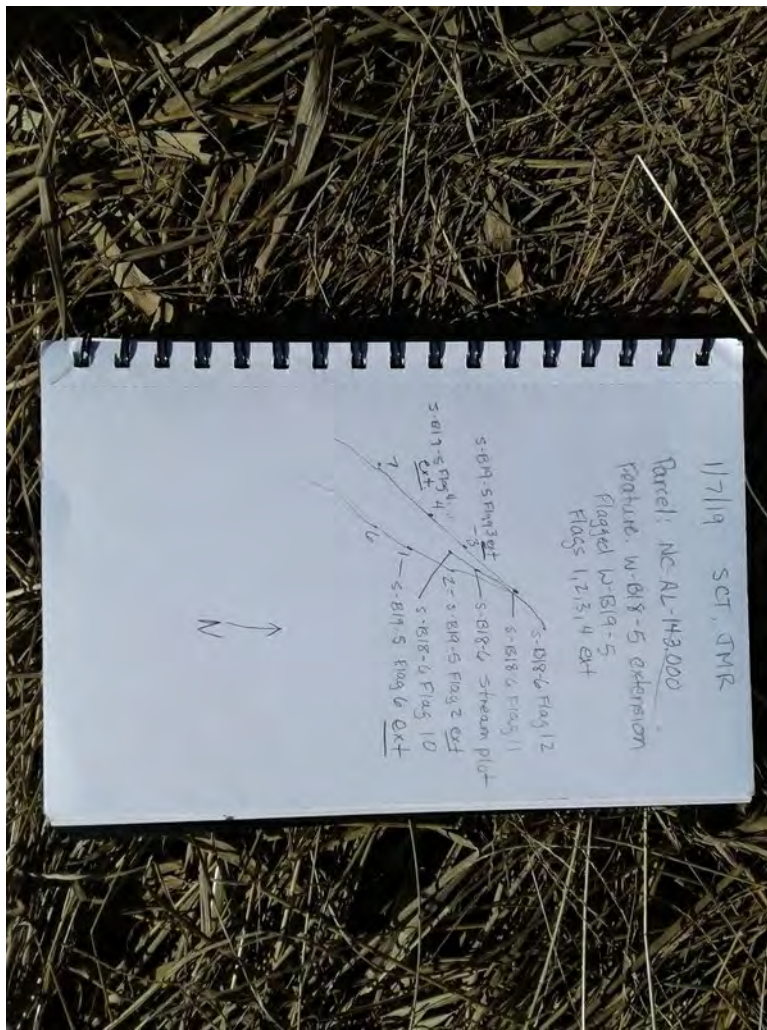
Photo of Sample Plot West



Photo of Sample Plot Sketch







extension

**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: MVP Southgate City/County: Eden, Rockingham Sampling Date: 2018-May-21  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-B18-36\_PEM-1  
 Investigator(s): James Bolduc, Tony Tredway, Simon King Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Flood Plain Local relief (concave, convex, none): Concave Slope (%): 0 to 1  
 Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.4950179 Long: -79.6792357 Datum: WGS84  
 Soil Map Unit Name: Codorus loam, 0 to 2 percent slopes, frequently flooded NWI classification: None  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:  Covertypes is PEM. Circumstances are not normal due to agricultural activities.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)  <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  	
Remarks:	

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

Sampling Point: W-B18-36 PEM-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	0 = Total Cover			
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>		
Sapling/Shrub Stratum	(Plot size: <u>15</u> )			
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
	0 = Total Cover			
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>		
Herb Stratum	(Plot size: <u>5</u> )			
1. <u>Juncus effusus</u>	90	Yes	FACW	
2. <u>Carex vulpinoidea</u>	5	No	OBL	
3. <u>Eleocharis palustris</u>	5	No	OBL	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
	100 = Total Cover			
	50% of total cover: <u>50</u>	20% of total cover: <u>20</u>		
Woody Vine Stratum	(Plot size: <u>30</u> )			
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
	0 = Total Cover			
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>		

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 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 <u>10</u>	x 1 = <u>10</u>
FACW species <u>90</u>	x 2 = <u>180</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals <u>100</u>	(A) <u>190</u> (B)
Prevalence Index = B/A = <u>1.9</u>	

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤ 3.0<sup>1</sup>

4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Definitions of Four Vegetation Strata:**

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

**Sapling/shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 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-B18-36 PEM-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0 - 10	10YR 5/2	90	7.5YR 5/6	10	C	M	Silty Clay Loam	Mixed
10 - 18	10YR 4/2	90	7.5YR 5/6	10	C	M	Silty Clay Loam	

<sup>1</sup>Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup>Location: PL = Pore Lining, M = Matrix.

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

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

Restrictive Layer (if observed): Type: _____ None _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	--

Remarks:

A positive indication of hydric soil was observed.

Hydrology Photos



Vegetation Photos



Soil Photos



Photo of Sample Plot  
North



extension facing n near flag W-B19-3

Photo of Sample Plot  
East



Photo of Sample Plot  
South





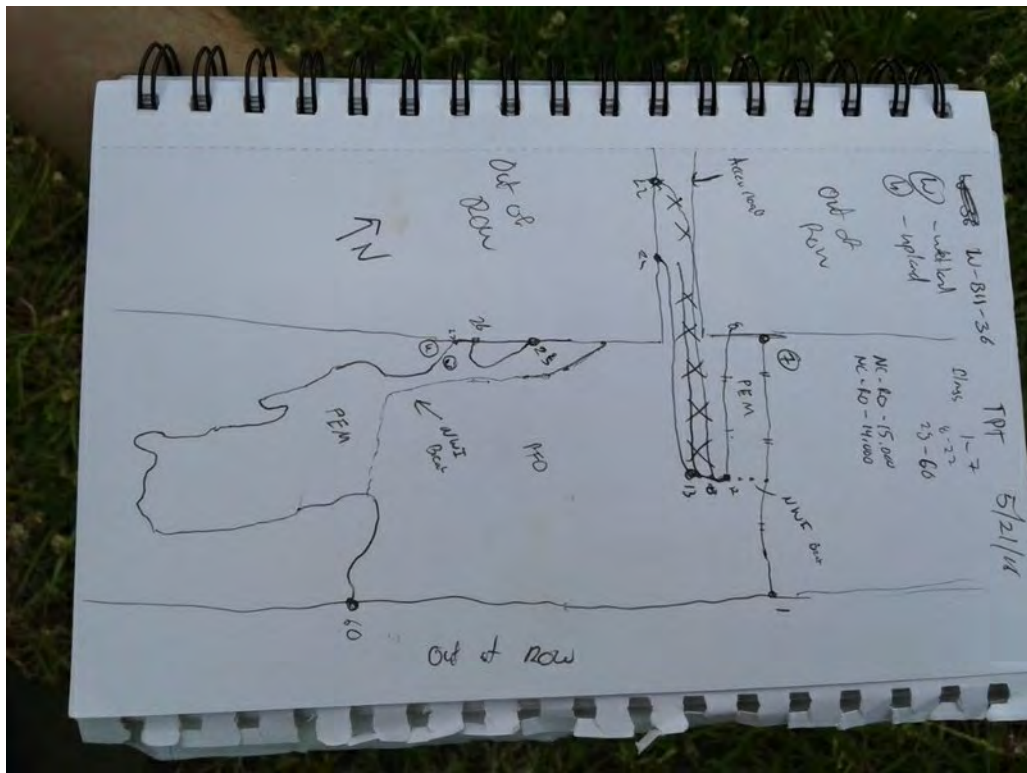


extension facing s near W-B19-3

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: Graham, Alamance Co... Sampling Date: 2019-Jan-09  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-B19-151\_PEM-1  
 Investigator(s): Simon King, Joe Roy, Susan Thebert Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0 to 1  
 Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.0463536 Long: -79.3665937 Datum: WGS84  
 Soil Map Unit Name: Chewacla loam, 0 to 2 percent slopes, frequently flooded NWI classification: None  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:  Covertypes is PEM. Area is wetland, all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  _____ _____	
Remarks:  _____ _____	

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

Sampling Point: W-B19-151 PEM-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	2 (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	3 (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	66.7 (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>	
5. _____	_____	_____	_____	<u>Total % Cover of:</u>	<u>Multiply By:</u>
6. _____	_____	_____	_____	OBL species	10 x 1 = 10
7. _____	_____	_____	_____	FACW species	25 x 2 = 50
_____ = Total Cover				FAC species	0 x 3 = 0
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				FACU species	10 x 4 = 40
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				UPL species	0 x 5 = 0
1. _____	_____	_____	_____	Column Totals	45 (A) 100 (B)
2. _____	_____	_____	_____	Prevalence Index = B/A = <u>2.2</u>	
3. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b>	
4. _____	_____	_____	_____	____ 1- Rapid Test for Hydrophytic Vegetation	
5. _____	_____	_____	_____	<input checked="" type="checkbox"/> 2 - Dominance Test is >50%	
6. _____	_____	_____	_____	<input checked="" type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>	
7. _____	_____	_____	_____	____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
8. _____	_____	_____	_____	____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
9. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
_____ = Total Cover				<b>Definitions of Four Vegetation Strata:</b>	
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
<b>Herb Stratum</b> (Plot size: <u>5</u> )				<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
1. <i>Juncus effusus</i>	25	Yes	FACW	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
2. <i>Symphotrichum puniceum</i>	10	Yes	OBL	<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
3. <i>Festuca rubra</i>	10	Yes	FACU	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____	<b>Woody Vine Stratum</b> (Plot size: <u>30</u> )	
_____ = Total Cover					
50% of total cover: <u>22.5</u> 20% of total cover: <u>9</u>					
<b>Woody Vine Stratum</b> (Plot size: <u>30</u> )					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
_____ = Total Cover					
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>					
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>  					



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: Graham, Alamance Co... Sampling Date: 2019-Jan-09  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-B19-151\_UPL-1  
 Investigator(s): Simon King, Joe Roy, Susan Thebert Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Flood Plain Local relief (concave, convex, none): Convex Slope (%): 1 to 3  
 Subregion (LRR or MLRA): Lat: 36.0463901 Long: -79.3664878 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:  Covertype is UPL. Area is upland, not all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>			<u>Secondary Indicators (minimum of two required)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)			
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)			
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)			
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)			
		<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>			Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____			
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____			
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____			
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-B19-151 UPL-1

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	0 (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	2 (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	0 (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>	
5. _____	_____	_____	_____	<u>Total % Cover of:</u>	<u>Multiply By:</u>
6. _____	_____	_____	_____	OBL species	5 x 1 = 5
7. _____	_____	_____	_____	FACW species	0 x 2 = 0
	0 = Total Cover			FAC species	0 x 3 = 0
	50% of total cover: 0	20% of total cover: 0		FACU species	40 x 4 = 160
<b>Sapling/Shrub Stratum</b> (Plot size: ____)				UPL species	0 x 5 = 0
1. _____	_____	_____	_____	Column Totals	45 (A) 165 (B)
2. _____	_____	_____	_____	Prevalence Index = B/A = 3.7	
3. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b>	
4. _____	_____	_____	_____	____ 1 - Rapid Test for Hydrophytic Vegetation	
5. _____	_____	_____	_____	____ 2 - Dominance Test is > 50%	
6. _____	_____	_____	_____	____ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>	
7. _____	_____	_____	_____	____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
8. _____	_____	_____	_____	____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
9. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
	0 = Total Cover			<b>Definitions of Four Vegetation Strata:</b>	
	50% of total cover: 0	20% of total cover: 0		<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
<b>Herb Stratum</b> (Plot size: 5 )				<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
1. <i>Festuca rubra</i>	20	Yes	FACU	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
2. <i>Dactylis glomerata</i>	20	Yes	FACU	<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
3. <i>Symphotrichum puniceum</i>	5	No	OBL		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
	45 = Total Cover				
	50% of total cover: 22.5	20% of total cover: 9			
<b>Woody Vine Stratum</b> (Plot size: ____)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
	0 = Total Cover				
	50% of total cover: 0	20% of total cover: 0			
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>					
Fallow field. No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).					



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: Reidsville, Rockingham... Sampling Date: 2019-Jan-10  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-B19-156\_PFO-1  
 Investigator(s): Simon King, Joe Roy, Susan Thebert Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 1 to 3  
 Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.4221524 Long: -79.655121 Datum: WGS84  
 Soil Map Unit Name: Codorus loam, 0 to 2 percent slopes, frequently flooded NWI classification:  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
<b>Remarks:</b>		
Covertype is PFO. Per USACE site visit on 9/25/18, site is a wetland, soils are hydric, vegetation is not hydrophytic.		

**HYDROLOGY**

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

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

Sampling Point: W-B19-156\_PFO-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. <i>Liriodendron tulipifera</i>	15	Yes	FACU	Number of Dominant Species That Are OBL, FACW, or FAC:	0 (A)
2. <i>Ligustrum sinense</i>	10	Yes	FACU	Total Number of Dominant Species Across All Strata:	4 (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC:	0 (A/B)
4. _____				<b>Prevalence Index worksheet:</b>	
5. _____				<u>25</u> = Total Cover	
6. _____				50% of total cover: <u>12.5</u>	20% of total cover: <u>5</u>
7. _____				<b>Sapling/Shrub Stratum</b> (Plot size: <u>15'</u> )	
1. <i>Ligustrum sinense</i>	15	Yes	FACU		
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
				<u>15</u> = Total Cover	
				50% of total cover: <u>7.5</u>	20% of total cover: <u>3</u>
<b>Herb Stratum</b> (Plot size: <u>5'</u> )					
1. _____					
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
				<u>0</u> = Total Cover	
				50% of total cover: <u>0</u>	20% of total cover: <u>0</u>
<b>Woody Vine Stratum</b> (Plot size: <u>30'</u> )					
1. <i>Lonicera japonica</i>	5	Yes	FACU		
2. _____					
3. _____					
4. _____					
5. _____					
				<u>5</u> = Total Cover	
				50% of total cover: <u>2.5</u>	20% of total cover: <u>1</u>
Remarks: (Include photo numbers here or on a separate sheet.)				<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

SOIL

Sampling Point: W-B19-156\_PFO-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>		
0 - 4	2.5Y 3/2	95	5YR 4/6	5	C	Loam	
4 - 18	5GY 5/1	90	5YR 4/6	10	C	Silt Loam	

<sup>1</sup>Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. <sup>2</sup>Location: PL = Pore Lining, M = Matrix.

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

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

Restrictive Layer (if observed):	Hydric Soil Present?
Type: <u>None</u>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Depth (inches): _____	

Remarks:



Photo of Sample Plot  
North



Photo of Sample Plot  
East



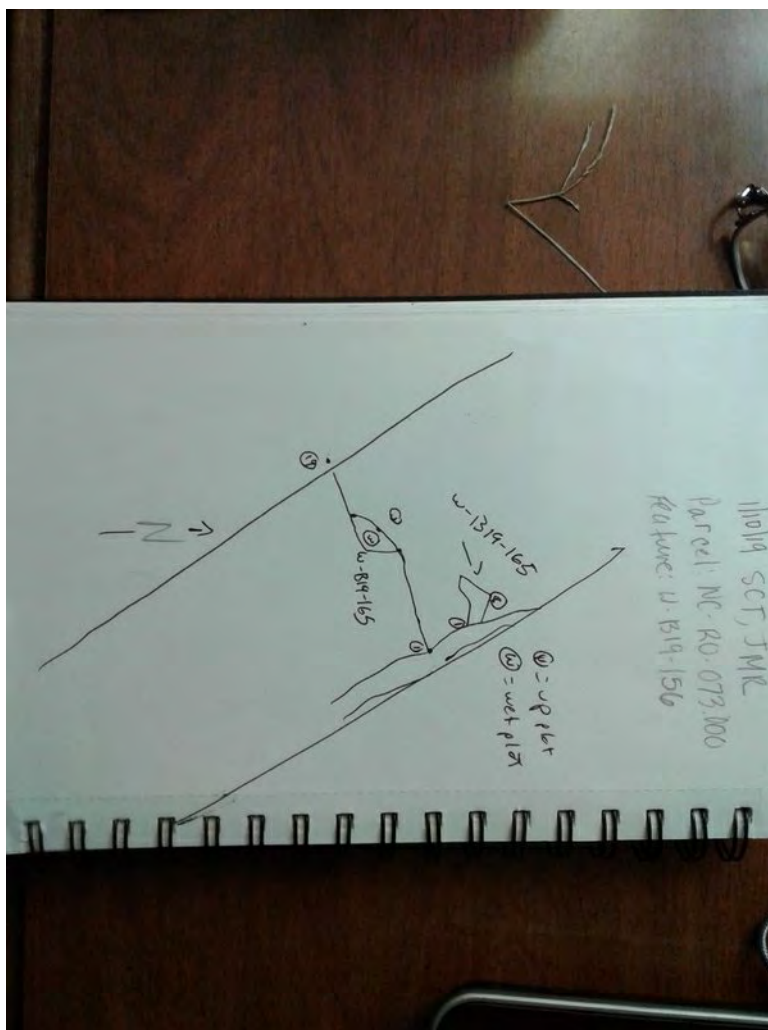
Photo of Sample Plot  
South



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: Reidsville, Rockingham... Sampling Date: 2019-Jan-10  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-B19-156\_UPL-2  
 Investigator(s): Simon King, Joe Roy, Karla Fortier, Susan Thebert 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: 36.422229 Long: -79.6551565 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:		
Covertypes is UPL. Area is upland, not all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	
(includes capillary fringe)		
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-B19-156 UPL-2

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. <i>Liriodendron tulipifera</i>	40	Yes	FACU	Number of Dominant Species That Are OBL, FACW, or FAC:	1 (A)
2. <i>Carpinus caroliniana</i>	10	Yes	FAC	Total Number of Dominant Species Across All Strata:	5 (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC:	20 (A/B)
4. _____				<b>Prevalence Index worksheet:</b>	
5. _____				<u>50</u> = Total Cover	
6. _____				50% of total cover: <u>25</u>	20% of total cover: <u>10</u>
7. _____				<b>Sapling/Shrub Stratum</b> (Plot size: <u>15'</u> )	
1. _____					
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
				<u>0</u> = Total Cover	
				50% of total cover: <u>0</u>	20% of total cover: <u>0</u>
<b>Herb Stratum</b> (Plot size: <u>5'</u> )				<b>Hydrophytic Vegetation Indicators:</b>	
1. <i>Polystichum acrostichoides</i>	20	Yes	FACU	___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is > 50% ___ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup> ___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
2. _____				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
3. _____				<b>Definitions of Four Vegetation Strata:</b>	
4. _____				<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
5. _____				<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
6. _____				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
7. _____				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
8. _____					
9. _____					
10. _____					
11. _____					
				<u>20</u> = Total Cover	
				50% of total cover: <u>10</u>	20% of total cover: <u>4</u>
<b>Woody Vine Stratum</b> (Plot size: <u>30'</u> )				<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
1. <i>Lonicera japonica</i>	10	Yes	FACU		
2. <i>Smilax auriculata</i>	5	Yes	FACU		
3. _____					
4. _____					
5. _____					
				<u>15</u> = Total Cover	
				50% of total cover: <u>7.5</u>	20% of total cover: <u>3</u>
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>					



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: Burlington, Alamance ... Sampling Date: 2019-Jan-15  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-B19-159\_PFO-1  
 Investigator(s): Simon King, Joe Roy, Karla Fortier, Susan Thebert Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0 to 1  
 Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.1432976 Long: -79.3829895 Datum: WGS84  
 Soil Map Unit Name: Vance sandy loam, 6 to 10 percent slopes NWI classification:  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_, Soil \_\_\_\_, or Hydrology \_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_  
 Are Vegetation \_\_\_\_, Soil \_\_\_\_, or Hydrology \_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No ____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No ____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No ____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No ____	
Remarks:  Covertype is PFO. Area is wetland, all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>			<u>Secondary Indicators (minimum of two required)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)			
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)			
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)			
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)			
		<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b> Surface Water Present? Yes ____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No ____ Depth (inches): <u>1</u> Saturation Present? Yes ____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)			Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No ____		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  _____ _____					
Remarks:  _____ _____					

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

Sampling Point: W-B19-159 PFO-1

	Absolute % Cover	Dominant Species?	Indicator Status																	
<b>Tree Stratum (Plot size: <u>30</u>)</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="text-align:right;"><b>Total % Cover of:</b></td> <td style="text-align:right;"><b>Multiply By:</b></td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>50</u></td> <td>x 3 = <u>150</u></td> </tr> <tr> <td>FACU species <u>15</u></td> <td>x 4 = <u>60</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals <u>65</u></td> <td>(A) <u>210</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.2</u></td> </tr> </table>	<b>Total % Cover of:</b>	<b>Multiply By:</b>	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>50</u>	x 3 = <u>150</u>	FACU species <u>15</u>	x 4 = <u>60</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals <u>65</u>	(A) <u>210</u> (B)	Prevalence Index = B/A = <u>3.2</u>	
<b>Total % Cover of:</b>	<b>Multiply By:</b>																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>50</u>	x 3 = <u>150</u>																			
FACU species <u>15</u>	x 4 = <u>60</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals <u>65</u>	(A) <u>210</u> (B)																			
Prevalence Index = B/A = <u>3.2</u>																				
1. <i>Acer rubrum</i>	25	Yes	FAC																	
2. <i>Liquidambar styraciflua</i>	5	No	FAC																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
<u>30</u> = Total Cover																				
50% of total cover: <u>15</u> 20% of total cover: <u>6</u>																				
<b>Sapling/Shrub Stratum (Plot size: <u>15'</u>)</b>																				
1. _____																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
<u>0</u> = Total Cover																				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																				
<b>Herb Stratum (Plot size: <u>5'</u>)</b>																				
1. <i>Microstegium vimineum</i>	20	Yes	FAC																	
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
<u>20</u> = Total Cover																				
50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																				
<b>Woody Vine Stratum (Plot size: <u>30'</u>)</b>																				
1. <i>Lonicera japonica</i>	15	Yes	FACU																	
2. _____																				
3. _____																				
4. _____																				
5. _____																				
<u>15</u> = Total Cover																				
50% of total cover: <u>7.5</u> 20% of total cover: <u>3</u>																				
<b>Hydrophytic Vegetation Indicators:</b>																				
____ 1 - Rapid Test for Hydrophytic Vegetation																				
<input checked="" type="checkbox"/> 2 - Dominance Test is >50%																				
____ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>																				
____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)																				
____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																				
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic																				
<b>Definitions of Four Vegetation Strata:</b>																				
<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.																				
<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.																				
<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.																				
<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																				
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>																				
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).																				



Photo of Sample Plot  
North



Photo of Sample Plot  
East



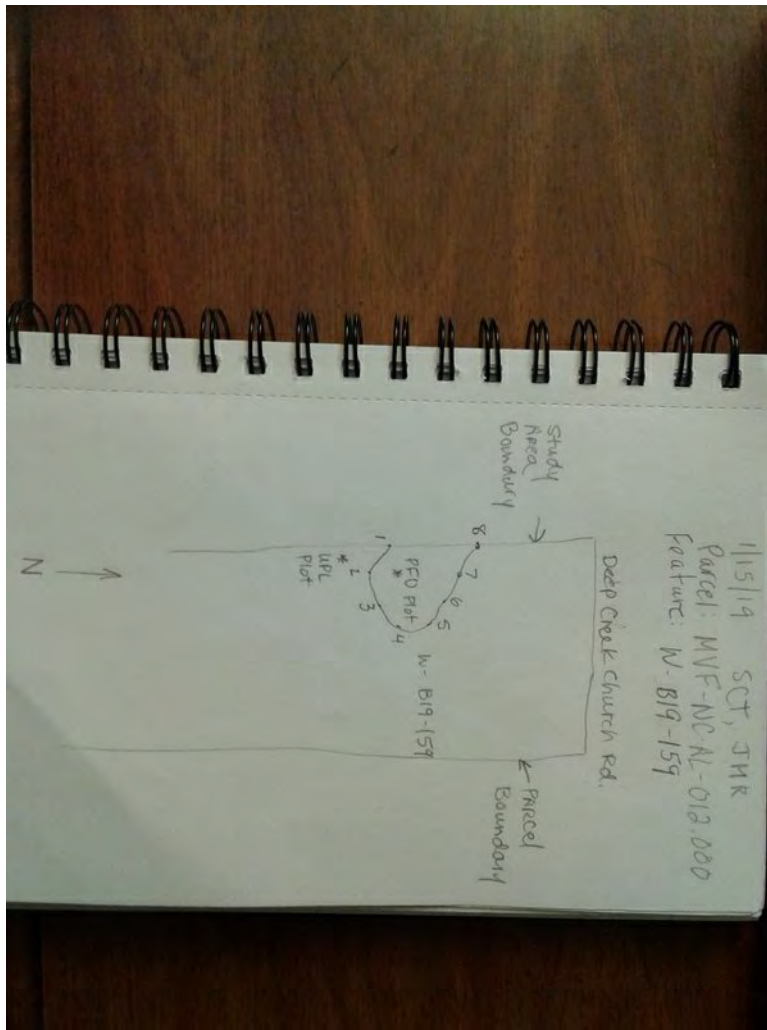
Photo of Sample Plot South



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: Burlington, Alamance ... Sampling Date: 2019-Jan-15  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-B19-159\_UPL-2  
 Investigator(s): Simon King, Joe Roy, Susan Thebert Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Foot slope Local relief (concave, convex, none): Convex Slope (%): 1 to 3  
 Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.1432115 Long: -79.3830361 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:  Covertype is UPL. Area is upland, not all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>			<u>Secondary Indicators (minimum of two required)</u>					
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)						
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)						
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)						
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)						
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)						
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)						
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)						
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)						
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)						
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)						
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)						
		<input type="checkbox"/> FAC-Neutral Test (D5)						
<b>Field Observations:</b>						Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____							
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____							
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (includes capillary fringe)	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-B19-159 UPL-2

	Absolute % Cover	Dominant Species?	Indicator Status																									
<b>Tree Stratum (Plot size: 30)</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;"></th> <th style="width: 25%; text-align: center;">Total % Cover of:</th> <th style="width: 25%; text-align: center;">Multiply By:</th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;"><u>0</u></td> <td style="text-align: center;">x 1 = <u>0</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>0</u></td> <td style="text-align: center;">x 2 = <u>0</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>0</u></td> <td style="text-align: center;">x 3 = <u>0</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>80</u></td> <td style="text-align: center;">x 4 = <u>320</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td style="text-align: center;">x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;"><u>80</u></td> <td style="text-align: center;">(A) <u>320</u> (B)</td> </tr> <tr> <td colspan="3" style="text-align: center;">Prevalence Index = B/A = <u>4</u></td> </tr> </tbody> </table>		Total % Cover of:	Multiply By:	OBL species	<u>0</u>	x 1 = <u>0</u>	FACW species	<u>0</u>	x 2 = <u>0</u>	FAC species	<u>0</u>	x 3 = <u>0</u>	FACU species	<u>80</u>	x 4 = <u>320</u>	UPL species	<u>0</u>	x 5 = <u>0</u>	Column Totals	<u>80</u>	(A) <u>320</u> (B)	Prevalence Index = B/A = <u>4</u>		
	Total % Cover of:	Multiply By:																										
OBL species	<u>0</u>	x 1 = <u>0</u>																										
FACW species	<u>0</u>	x 2 = <u>0</u>																										
FAC species	<u>0</u>	x 3 = <u>0</u>																										
FACU species	<u>80</u>	x 4 = <u>320</u>																										
UPL species	<u>0</u>	x 5 = <u>0</u>																										
Column Totals	<u>80</u>	(A) <u>320</u> (B)																										
Prevalence Index = B/A = <u>4</u>																												
1. <i>Liriodendron tulipifera</i>	30	Yes	FACU																									
2. _____																												
3. _____																												
4. _____																												
5. _____																												
6. _____																												
7. _____																												
<u>30</u> = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u>																												
<b>Sapling/Shrub Stratum (Plot size: 15')</b>																												
1. _____																												
2. _____																												
3. _____																												
4. _____																												
5. _____																												
6. _____																												
7. _____																												
8. _____																												
9. _____																												
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																												
<b>Herb Stratum (Plot size: 5')</b>																												
1. _____																												
2. _____																												
3. _____																												
4. _____																												
5. _____																												
6. _____																												
7. _____																												
8. _____																												
9. _____																												
10. _____																												
11. _____																												
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																												
<b>Woody Vine Stratum (Plot size: 30')</b>																												
1. <i>Lonicera japonica</i>	30	Yes	FACU																									
2. <i>Hedera helix</i>	20	Yes	FACU																									
3. _____																												
4. _____																												
5. _____																												
<u>50</u> = Total Cover 50% of total cover: <u>25</u> 20% of total cover: <u>10</u>																												
<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																												
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>   																												





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: Burlington, Alamance ... Sampling Date: 2019-Jan-15  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-B19-161\_PFO-1  
 Investigator(s): Simon King, Joe Roy, Karla Fortier, Susan Thebert 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: 36.1401398 Long: -79.3825376 Datum: WGS84  
 Soil Map Unit Name: Helena sandy loam, 6 to 10 percent slopes NWI classification:  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes \_\_\_ No  (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_, Soil \_\_\_\_, or Hydrology \_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_  
 Are Vegetation \_\_\_\_, Soil \_\_\_\_, or Hydrology \_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No ___	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No ___
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No ___	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No ___	
Remarks:  Covertypes is PFO.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>			<u>Secondary Indicators (minimum of two required)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)			
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)			
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)			
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)			
		<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>					
Surface Water Present?	Yes ___ No <input checked="" type="checkbox"/>	Depth (inches):			
Water Table Present?	Yes <input checked="" type="checkbox"/> No ___	Depth (inches):	2	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No ___	
Saturation Present?	Yes ___ No <input checked="" type="checkbox"/>	Depth (inches):			
(includes capillary fringe)					
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-B19-161\_PFO-1

	Absolute % Cover	Dominant Species?	Indicator Status																	
<b>Tree Stratum (Plot size: 30)</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="text-align:right;"><b>Total % Cover of:</b></td> <td style="text-align:right;"><b>Multiply By:</b></td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>15</u></td> <td>x 3 = <u>45</u></td> </tr> <tr> <td>FACU species <u>2</u></td> <td>x 4 = <u>8</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals <u>17</u></td> <td>(A) <u>53</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.1</u></td> </tr> </table>	<b>Total % Cover of:</b>	<b>Multiply By:</b>	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>15</u>	x 3 = <u>45</u>	FACU species <u>2</u>	x 4 = <u>8</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals <u>17</u>	(A) <u>53</u> (B)	Prevalence Index = B/A = <u>3.1</u>	
<b>Total % Cover of:</b>	<b>Multiply By:</b>																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>15</u>	x 3 = <u>45</u>																			
FACU species <u>2</u>	x 4 = <u>8</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals <u>17</u>	(A) <u>53</u> (B)																			
Prevalence Index = B/A = <u>3.1</u>																				
1. <i>Quercus phellos</i>	15	Yes	FAC																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ = Total Cover																				
50% of total cover: <u>7.5</u>		20% of total cover: <u>3</u>																		
<b>Sapling/Shrub Stratum (Plot size: 15')</b>																				
1. <i>Ligustrum sinense</i>	2	No	FACU																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
_____ = Total Cover																				
50% of total cover: <u>1</u>		20% of total cover: <u>0.4</u>																		
<b>Herb Stratum (Plot size: 5')</b>																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
_____ = Total Cover																				
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>																		
<b>Woody Vine Stratum (Plot size: 30')</b>																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
_____ = Total Cover																				
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>																		
<b>Hydrophytic Vegetation Indicators:</b>																				
____ 1 - Rapid Test for Hydrophytic Vegetation																				
<input checked="" type="checkbox"/> 2 - Dominance Test is >50%																				
____ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>																				
____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)																				
____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																				
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic																				
<b>Definitions of Four Vegetation Strata:</b>																				
<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.																				
<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.																				
<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.																				
<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																				
<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																				
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>																				
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).																				



Photo of Sample Plot  
North



extension north

Photo of Sample Plot  
East



extension south



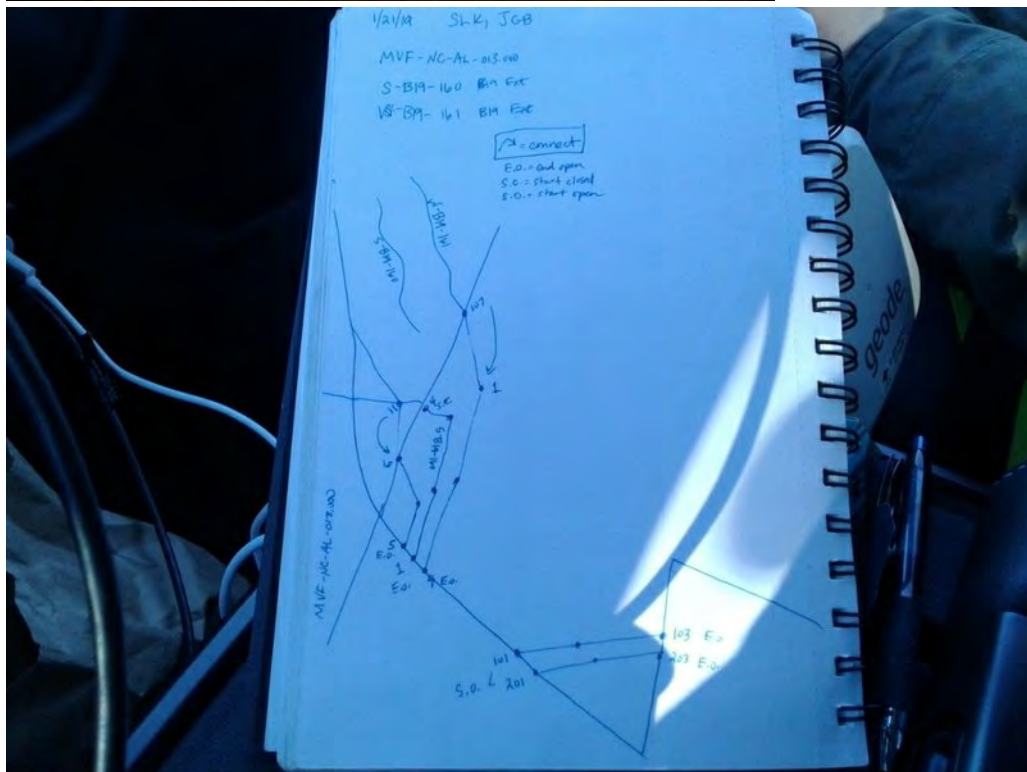
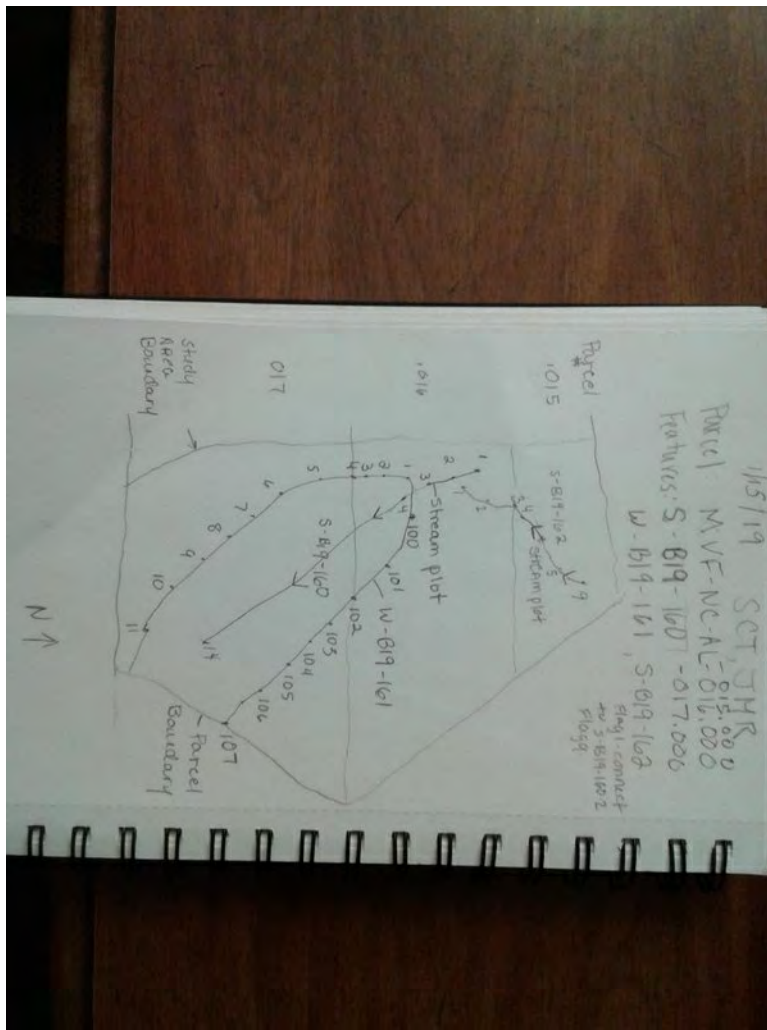
Photo of Sample Plot South



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: Burlington, Alamance ... Sampling Date: 2019-Jan-15  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-B19-161\_UPL-2  
 Investigator(s): Simon King, Joe Roy, Karla Fortier, Susan Thebert 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: 36.1400711 Long: -79.3825135 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:  Covertypes is UPL. Area is upland, not all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>			<u>Secondary Indicators (minimum of two required)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)			
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)			
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)			
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)			
		<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>			Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Surface Water Present?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Depth (inches): _____			
Water Table Present?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Depth (inches): _____			
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input type="checkbox"/>	Depth (inches): _____			
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-B19-161 UPL-2

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator	Status
1. <i>Quercus alba</i>	15	Yes	FACU	
2. <i>Quercus stellata</i>	5	Yes	UPL	
3. <i>Acer rubrum</i>	3	No	FAC	
4. _____				
5. _____				
6. _____				
7. _____				
23 = Total Cover				
50% of total cover: <u>11.5</u> 20% of total cover: <u>4.6000000000000005</u>				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u> )	Absolute % Cover	Dominant Species?	Indicator	Status
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
0 = Total Cover				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				
<u>Herb Stratum</u> (Plot size: <u>5'</u> )	Absolute % Cover	Dominant Species?	Indicator	Status
1. <i>Allium canadense</i>		No	FACU	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
0 = Total Cover				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator	Status
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
0 = Total Cover				
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				

**Dominance Test worksheet:**

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

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

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

**Prevalence Index worksheet:**

	<u>Total % Cover of:</u>		<u>Multiply By:</u>
OBL species	<u>0</u>	x 1 =	<u>0</u>
FACW species	<u>0</u>	x 2 =	<u>0</u>
FAC species	<u>3</u>	x 3 =	<u>9</u>
FACU species	<u>  </u>	x 4 =	<u>  </u>
UPL species	<u>5</u>	x 5 =	<u>25</u>
Column Totals	<u>  </u> (A)		<u>  </u> (B)

Prevalence Index = B/A =   

**Hydrophytic Vegetation Indicators:**

   1- Rapid Test for Hydrophytic Vegetation

   2 - Dominance Test is > 50%

   3 - Prevalence Index is ≤ 3.0<sup>1</sup>

   4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

**Definitions of Four Vegetation Strata:**

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

**Sapling/shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 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.)



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: Burlington, Alamance ... Sampling Date: 2019-Jan-16  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-B19-164\_PFO-1  
 Investigator(s): Simon King, Joe Roy, Karla Fortier, Susan Thebert 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: 36.1307275 Long: -79.3691272 Datum: WGS84  
 Soil Map Unit Name: Helena sandy loam, 6 to 10 percent slopes NWI classification:  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes \_\_\_ No  (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_, Soil \_\_\_\_, or Hydrology \_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_  
 Are Vegetation \_\_\_\_, Soil \_\_\_\_, or Hydrology \_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No ___	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No ___
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No ___	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No ___	
Remarks:  Covertypes is PFO. Area is wetland, all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input checked="" type="checkbox"/> Surface Water (A1)      ___ True Aquatic Plants (B14) <input checked="" type="checkbox"/> High Water Table (A2)      ___ Hydrogen Sulfide Odor (C1) ___ Saturation (A3)      ___ Oxidized Rhizospheres on Living Roots (C3) ___ Water Marks (B1)      ___ Presence of Reduced Iron (C4) ___ Sediment Deposits (B2)      ___ Recent Iron Reduction in Tilled Soils (C6) ___ Drift Deposits (B3)      ___ Thin Muck Surface (C7) ___ Algal Mat or Crust (B4)      ___ Other (Explain in Remarks) ___ Iron Deposits (B5) ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9) ___ Aquatic Fauna (B13)	<b>Secondary Indicators (minimum of two required)</b> ___ 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) <input checked="" type="checkbox"/> Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No ___      Depth (inches): <u>3</u> Water Table Present? Yes <input checked="" type="checkbox"/> No ___      Depth (inches): <u>0</u> Saturation Present? Yes ___ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:	



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

Sampling Point: W-B19-164 PFO-1

	Absolute % Cover	Dominant Species?	Indicator Status																																	
<b>Tree Stratum (Plot size: 30)</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 20%; text-align: center;">Total % Cover of:</th> <th style="width: 20%;"></th> <th style="width: 20%; text-align: center;">Multiply By:</th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 1 = <u>0</u></td> </tr> <tr> <td>FACW species</td> <td></td> <td></td> <td style="text-align: center;">x 2 = _____</td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>30</u></td> <td></td> <td style="text-align: center;">x 3 = <u>90</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>27</u></td> <td></td> <td style="text-align: center;">x 4 = <u>108</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals</td> <td></td> <td style="text-align: center;">(A)</td> <td style="text-align: center;">(B)</td> </tr> <tr> <td colspan="4" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </tbody> </table>		Total % Cover of:		Multiply By:	OBL species	<u>0</u>		x 1 = <u>0</u>	FACW species			x 2 = _____	FAC species	<u>30</u>		x 3 = <u>90</u>	FACU species	<u>27</u>		x 4 = <u>108</u>	UPL species	<u>0</u>		x 5 = <u>0</u>	Column Totals		(A)	(B)	Prevalence Index = B/A = _____			
	Total % Cover of:		Multiply By:																																	
OBL species	<u>0</u>		x 1 = <u>0</u>																																	
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Column Totals		(A)	(B)																																	
Prevalence Index = B/A = _____																																				
1. <i>Acer rubrum</i>	30	Yes	FAC																																	
2. <i>Platanus occidentalis</i>	10	Yes	FACW																																	
3. <i>Liriodendron tulipifera</i>	5	No	FACU																																	
4. _____																																				
5. _____																																				
6. _____																																				
7. _____																																				
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"></td> <td style="text-align: center;"><u>45</u></td> <td colspan="2" style="text-align: center;">= Total Cover</td> </tr> <tr> <td style="text-align: right;">50% of total cover:</td> <td style="text-align: center;"><u>22.5</u></td> <td style="text-align: right;">20% of total cover:</td> <td style="text-align: center;"><u>9</u></td> </tr> </table>					<u>45</u>	= Total Cover		50% of total cover:	<u>22.5</u>	20% of total cover:	<u>9</u>																									
	<u>45</u>	= Total Cover																																		
50% of total cover:	<u>22.5</u>	20% of total cover:	<u>9</u>																																	
<b>Sapling/Shrub Stratum (Plot size: 15')</b>																																				
1. <i>Ligustrum sinense</i>	20	Yes	FACU																																	
2. _____																																				
3. _____																																				
4. _____																																				
5. _____																																				
6. _____																																				
7. _____																																				
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<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"></td> <td style="text-align: center;"><u>20</u></td> <td colspan="2" style="text-align: center;">= Total Cover</td> </tr> <tr> <td style="text-align: right;">50% of total cover:</td> <td style="text-align: center;"><u>10</u></td> <td style="text-align: right;">20% of total cover:</td> <td style="text-align: center;"><u>4</u></td> </tr> </table>					<u>20</u>	= Total Cover		50% of total cover:	<u>10</u>	20% of total cover:	<u>4</u>																									
	<u>20</u>	= Total Cover																																		
50% of total cover:	<u>10</u>	20% of total cover:	<u>4</u>																																	
<b>Herb Stratum (Plot size: 5')</b>																																				
1. <i>Carex annectens</i>		No	FACW																																	
2. _____																																				
3. _____																																				
4. _____																																				
5. _____																																				
6. _____																																				
7. _____																																				
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10. _____																																				
11. _____																																				
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"></td> <td style="text-align: center;"><u>0</u></td> <td colspan="2" style="text-align: center;">= Total Cover</td> </tr> <tr> <td style="text-align: right;">50% of total cover:</td> <td style="text-align: center;"><u>0</u></td> <td style="text-align: right;">20% of total cover:</td> <td style="text-align: center;"><u>0</u></td> </tr> </table>					<u>0</u>	= Total Cover		50% of total cover:	<u>0</u>	20% of total cover:	<u>0</u>																									
	<u>0</u>	= Total Cover																																		
50% of total cover:	<u>0</u>	20% of total cover:	<u>0</u>																																	
<b>Woody Vine Stratum (Plot size: 30')</b>																																				
1. <i>Lonicera japonica</i>	2	No	FACU																																	
2. _____																																				
3. _____																																				
4. _____																																				
5. _____																																				
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"></td> <td style="text-align: center;"><u>2</u></td> <td colspan="2" style="text-align: center;">= Total Cover</td> </tr> <tr> <td style="text-align: right;">50% of total cover:</td> <td style="text-align: center;"><u>1</u></td> <td style="text-align: right;">20% of total cover:</td> <td style="text-align: center;"><u>0.4</u></td> </tr> </table>					<u>2</u>	= Total Cover		50% of total cover:	<u>1</u>	20% of total cover:	<u>0.4</u>																									
	<u>2</u>	= Total Cover																																		
50% of total cover:	<u>1</u>	20% of total cover:	<u>0.4</u>																																	
<b>Hydrophytic Vegetation Indicators:</b> _____ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% _____ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup> _____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic																																				
<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																																				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																																				
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>  A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).																																				



Photo of Sample Plot  
North



Photo of Sample Plot  
East



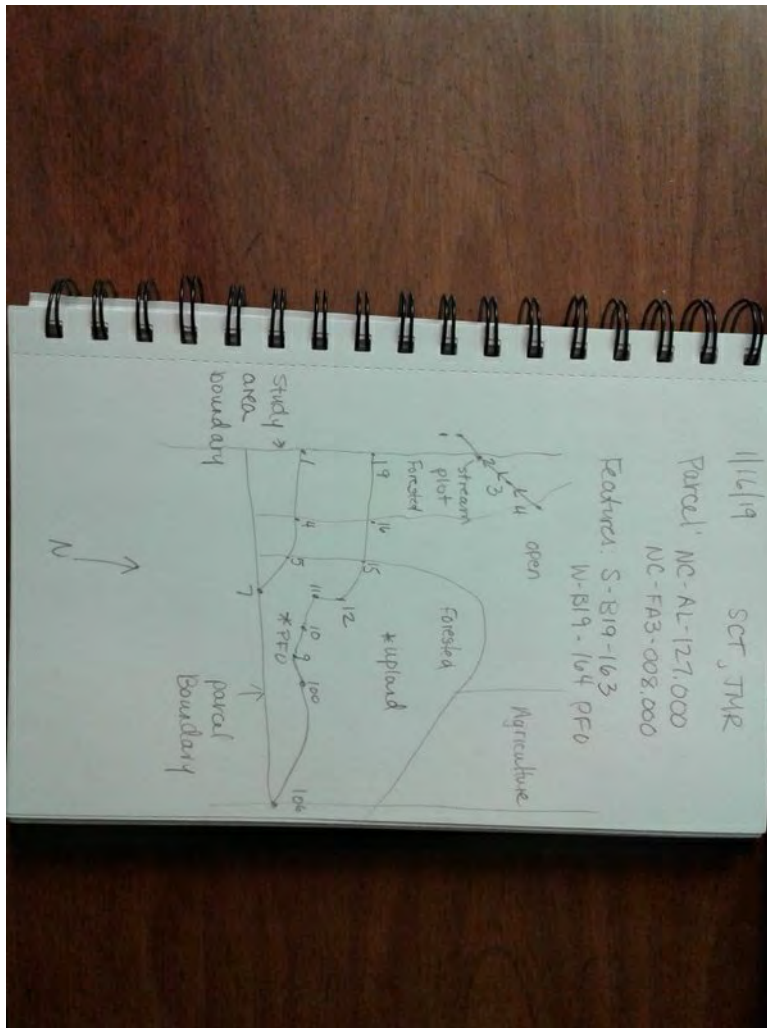
Photo of Sample Plot  
South



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: Burlington, Alamance ... Sampling Date: 2019-Jan-16  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-B19-164\_UPL-2  
 Investigator(s): Joseph Roy, Joe Roy, Susan Thebert Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0 to 1  
 Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.1309906 Long: -79.3692222 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:  Covertype is UPL. Area is upland, not all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)	
		<input type="checkbox"/> FAC-Neutral Test (D5)	
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  			
Remarks:  The criterion for wetland hydrology is not met.			

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

Sampling Point: W-B19-164 UPL-2

<u>Tree Stratum</u> (Plot size: <u>15</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. <i>Liriodendron tulipifera</i>	10	Yes	FACU	Number of Dominant Species That Are OBL, FACW, or FAC:	1 (A)
2. <i>Juniperus virginiana</i>	5	Yes	FACU	Total Number of Dominant Species Across All Strata:	6 (B)
3. <i>Platanus occidentalis</i>	5	Yes	FACW	Percent of Dominant Species That Are OBL, FACW, or FAC:	16.7 (A/B)
4. <i>Oxydendrum arboreum</i>	5	Yes	UPL		
5. _____					
6. _____					
7. _____					
	25 = Total Cover				
	50% of total cover: <u>12.5</u>	20% of total cover: <u>5</u>			
<b>Sapling/Shrub Stratum</b> (Plot size: <u>10</u> )				<b>Prevalence Index worksheet:</b>	
1. <i>Ligustrum japonicum</i>	5	Yes	UPL	<b>Total % Cover of:</b>	<b>Multiply By:</b>
2. <i>Lonicera japonica</i>	5	Yes	FACU	OBL species	0 x 1 = 0
3. _____				FACW species	5 x 2 = 10
4. _____				FAC species	0 x 3 = 0
5. _____				FACU species	20 x 4 = 80
6. _____				UPL species	10 x 5 = 50
7. _____				Column Totals	35 (A) 140 (B)
8. _____				Prevalence Index = B/A =	4
9. _____					
	10 = Total Cover			<b>Hydrophytic Vegetation Indicators:</b>	
	50% of total cover: <u>5</u>	20% of total cover: <u>2</u>		____ 1 - Rapid Test for Hydrophytic Vegetation	
<b>Herb Stratum</b> (Plot size: <u>5</u> )				____ 2 - Dominance Test is > 50%	
1. _____				____ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>	
2. _____				____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
3. _____				____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
4. _____				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
5. _____				<b>Definitions of Four Vegetation Strata:</b>	
6. _____				<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
7. _____				<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
8. _____				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
9. _____				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
10. _____					
11. _____					
	0 = Total Cover			<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>			
<b>Woody Vine Stratum</b> (Plot size: <u>30</u> )					
1. _____					
2. _____					
3. _____					
4. _____					
5. _____					
	0 = Total Cover				
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>			
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>					
No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC– or drier).					





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: Greensboro, Guilford ... Sampling Date: 2019-Jan-16  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-B19-165\_PFO-1  
 Investigator(s): Simon King, Joe Roy, Susan Thebert 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: 36.278478 Long: -79.559647 Datum: WGS84  
 Soil Map Unit Name: Pacolet sandy loam, 8 to 15 percent slopes NWI classification:  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:  Covertype is PFO. Area is wetland, all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)	
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>1</u>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>10</u>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>0</u>
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:  The criterion for wetland hydrology is met.			

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

Sampling Point: W-B19-165\_PFO-1

	Absolute % Cover	Dominant Species?	Indicator Status																																									
<b>Tree Stratum (Plot size: <u>30</u>)</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 20%; text-align: center;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 20%; text-align: center;">Multiply By:</th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;"><u>0</u></td> <td>x 1 =</td> <td style="text-align: center;"><u>0</u></td> <td></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>15</u></td> <td>x 2 =</td> <td style="text-align: center;"><u>30</u></td> <td></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>35</u></td> <td>x 3 =</td> <td style="text-align: center;"><u>105</u></td> <td></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>0</u></td> <td>x 4 =</td> <td style="text-align: center;"><u>0</u></td> <td></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td>x 5 =</td> <td style="text-align: center;"><u>0</u></td> <td></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;"><u>50</u></td> <td>(A)</td> <td style="text-align: center;"><u>135</u></td> <td>(B)</td> </tr> <tr> <td colspan="5" style="text-align: center;">Prevalence Index = B/A = <u>2.7</u></td> </tr> </tbody> </table> <b>Hydrophytic Vegetation Indicators:</b> ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 <sup>1</sup> ___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic  <b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.  Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Total % Cover of:		Multiply By:		OBL species	<u>0</u>	x 1 =	<u>0</u>		FACW species	<u>15</u>	x 2 =	<u>30</u>		FAC species	<u>35</u>	x 3 =	<u>105</u>		FACU species	<u>0</u>	x 4 =	<u>0</u>		UPL species	<u>0</u>	x 5 =	<u>0</u>		Column Totals	<u>50</u>	(A)	<u>135</u>	(B)	Prevalence Index = B/A = <u>2.7</u>				
	Total % Cover of:		Multiply By:																																									
OBL species	<u>0</u>	x 1 =	<u>0</u>																																									
FACW species	<u>15</u>	x 2 =	<u>30</u>																																									
FAC species	<u>35</u>	x 3 =	<u>105</u>																																									
FACU species	<u>0</u>	x 4 =	<u>0</u>																																									
UPL species	<u>0</u>	x 5 =	<u>0</u>																																									
Column Totals	<u>50</u>	(A)	<u>135</u>		(B)																																							
Prevalence Index = B/A = <u>2.7</u>																																												
1. <i>Liquidambar styraciflua</i>	10	Yes	FAC																																									
2. <i>Acer rubrum</i>	10	Yes	FAC																																									
3. _____																																												
4. _____																																												
5. _____																																												
6. _____																																												
7. _____																																												
<u>20</u> = Total Cover																																												
50% of total cover: <u>10</u> 20% of total cover: <u>4</u>																																												
<b>Sapling/Shrub Stratum (Plot size: <u>15'</u>)</b>																																												
1. _____																																												
2. _____																																												
3. _____																																												
4. _____																																												
5. _____																																												
6. _____																																												
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8. _____																																												
9. _____																																												
<u>0</u> = Total Cover																																												
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																												
<b>Herb Stratum (Plot size: <u>5'</u>)</b>																																												
1. <i>Carex sp.</i>	15	Yes	FACW																																									
2. _____																																												
3. _____																																												
4. _____																																												
5. _____																																												
6. _____																																												
7. _____																																												
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9. _____																																												
10. _____																																												
11. _____																																												
<u>15</u> = Total Cover																																												
50% of total cover: <u>7.5</u> 20% of total cover: <u>3</u>																																												
<b>Woody Vine Stratum (Plot size: <u>30'</u>)</b>																																												
1. <i>Smilax rotundifolia</i>	15	Yes	FAC																																									
2. _____																																												
3. _____																																												
4. _____																																												
5. _____																																												
<u>15</u> = Total Cover																																												
50% of total cover: <u>7.5</u> 20% of total cover: <u>3</u>																																												
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>																																												
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).																																												



Photo of Sample Plot  
North



Photo of Sample Plot  
East



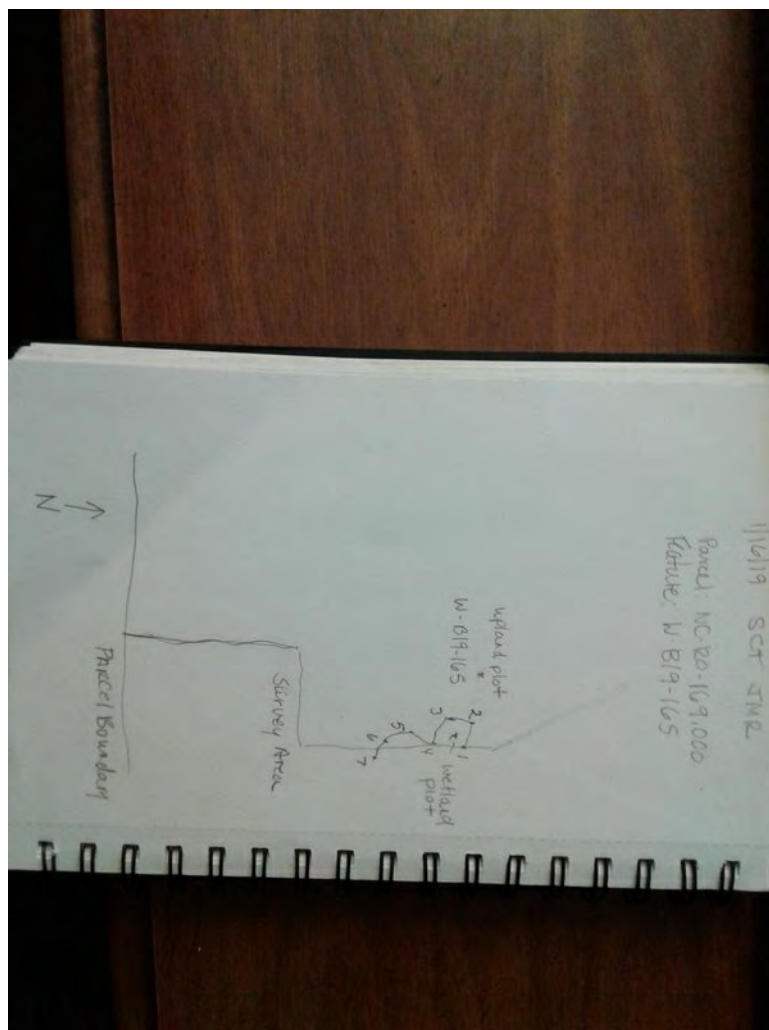
Photo of Sample Plot  
South



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: Greensboro, Guilford ... Sampling Date: 2019-Jan-16  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-B19-165\_UPL-2  
 Investigator(s): Simon King, Joe Roy, Susan Thebert 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: 36.278465 Long: -79.559797 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 <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes ___ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes ___ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes ___ No <input checked="" type="checkbox"/>	
Remarks:  Covertype is UPL. Area is upland, not all three wetland parameters are present.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>			<u>Secondary Indicators (minimum of two required)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)			
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)			
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)			
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)			
		<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b>			Wetland Hydrology Present? Yes ___ No <input checked="" type="checkbox"/>		
Surface Water Present?	Yes ___ No <input checked="" type="checkbox"/>	Depth (inches): _____			
Water Table Present?	Yes ___ No <input checked="" type="checkbox"/>	Depth (inches): _____			
Saturation Present? (includes capillary fringe)	Yes ___ No <input checked="" type="checkbox"/>	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-B19-165 UPL-2

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status																																									
1. <i>Liriodendron tulipifera</i>	20	Yes	FACU	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3</u> (A/B)																																								
2. <i>Prunus serotina</i>	10	Yes	FACU																																									
3. <i>Acer rubrum</i>	10	Yes	FAC																																									
4. _____																																												
5. _____																																												
6. _____																																												
7. _____																																												
<u>40</u> = Total Cover 50% of total cover: <u>20</u> 20% of total cover: <u>8</u>				<b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 20%; text-align: center;"><u>Total % Cover of:</u></th> <th style="width: 10%;"></th> <th style="width: 20%; text-align: center;"><u>Multiply By:</u></th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;"><u>0</u></td> <td>x 1 =</td> <td style="text-align: center;"><u>0</u></td> <td></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>0</u></td> <td>x 2 =</td> <td style="text-align: center;"><u>0</u></td> <td></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>10</u></td> <td>x 3 =</td> <td style="text-align: center;"><u>30</u></td> <td></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>32</u></td> <td>x 4 =</td> <td style="text-align: center;"><u>128</u></td> <td></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td>x 5 =</td> <td style="text-align: center;"><u>0</u></td> <td></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;"><u>42</u></td> <td>(A)</td> <td style="text-align: center;"><u>158</u></td> <td>(B)</td> </tr> <tr> <td colspan="5" style="text-align: center;">Prevalence Index = B/A = <u>3.8</u></td> </tr> </tbody> </table>		<u>Total % Cover of:</u>		<u>Multiply By:</u>		OBL species	<u>0</u>	x 1 =	<u>0</u>		FACW species	<u>0</u>	x 2 =	<u>0</u>		FAC species	<u>10</u>	x 3 =	<u>30</u>		FACU species	<u>32</u>	x 4 =	<u>128</u>		UPL species	<u>0</u>	x 5 =	<u>0</u>		Column Totals	<u>42</u>	(A)	<u>158</u>	(B)	Prevalence Index = B/A = <u>3.8</u>				
	<u>Total % Cover of:</u>		<u>Multiply By:</u>																																									
OBL species	<u>0</u>	x 1 =	<u>0</u>																																									
FACW species	<u>0</u>	x 2 =	<u>0</u>																																									
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UPL species	<u>0</u>	x 5 =	<u>0</u>																																									
Column Totals	<u>42</u>	(A)	<u>158</u>		(B)																																							
Prevalence Index = B/A = <u>3.8</u>																																												
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15'</u> )																																												
1. _____																																												
2. _____																																												
3. _____																																												
4. _____																																												
5. _____																																												
6. _____																																												
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8. _____																																												
9. _____																																												
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																												
<b>Herb Stratum</b> (Plot size: <u>5'</u> )																																												
1. <i>Polystichum acrostichoides</i>	2	No	FACU																																									
2. _____																																												
3. _____																																												
4. _____																																												
5. _____																																												
6. _____																																												
7. _____																																												
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10. _____																																												
11. _____																																												
<u>2</u> = Total Cover 50% of total cover: <u>1</u> 20% of total cover: <u>0.4</u>																																												
<b>Woody Vine Stratum</b> (Plot size: <u>30'</u> )																																												
1. _____																																												
2. _____																																												
3. _____																																												
4. _____																																												
5. _____																																												
<u>0</u> = Total Cover 50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																												
<b>Hydrophytic Vegetation Indicators:</b> ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is > 50% ___ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup> ___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic																																												
<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																																												
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																																												
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>  No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC– or drier).																																												



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: Burlington, Alamance ... Sampling Date: 2019-Jan-21  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-B19-168\_PEM-2  
 Investigator(s): Joseph Roy, Simon King, Jim Bolduc 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: 36.1400061 Long: -79.3815155 Datum: WGS84  
 Soil Map Unit Name: Helena sandy loam, 2 to 6 percent slopes NWI classification:  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<b>Remarks:</b>			
Covertypes is PEM. Area is wetland, all three wetland parameters are present. previously disturbed areas.			

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)	
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>1</u>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<u>        </u>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>0</u>
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>			
<b>Remarks:</b>			

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

Sampling Point: W-B19-168 PEM-2

	Absolute % Cover	Dominant Species?	Indicator Status																																									
<b>Tree Stratum (Plot size: <u>30</u>)</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)  <b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 20%; text-align: center;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 20%; text-align: center;">Multiply By:</th> <th style="width: 10%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 1 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>70</u></td> <td></td> <td style="text-align: center;">x 2 =</td> <td style="text-align: center;"><u>140</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 3 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 4 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td></td> <td style="text-align: center;">x 5 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;"><u>70</u></td> <td style="text-align: center;">(A)</td> <td></td> <td style="text-align: center;"><u>140</u> (B)</td> </tr> <tr> <td colspan="4" style="text-align: right;">Prevalence Index = B/A =</td> <td style="text-align: center;"><u>2</u></td> </tr> </tbody> </table>		Total % Cover of:		Multiply By:		OBL species	<u>0</u>		x 1 =	<u>0</u>	FACW species	<u>70</u>		x 2 =	<u>140</u>	FAC species	<u>0</u>		x 3 =	<u>0</u>	FACU species	<u>0</u>		x 4 =	<u>0</u>	UPL species	<u>0</u>		x 5 =	<u>0</u>	Column Totals	<u>70</u>	(A)		<u>140</u> (B)	Prevalence Index = B/A =				<u>2</u>
	Total % Cover of:		Multiply By:																																									
OBL species	<u>0</u>		x 1 =		<u>0</u>																																							
FACW species	<u>70</u>		x 2 =		<u>140</u>																																							
FAC species	<u>0</u>		x 3 =		<u>0</u>																																							
FACU species	<u>0</u>		x 4 =		<u>0</u>																																							
UPL species	<u>0</u>		x 5 =		<u>0</u>																																							
Column Totals	<u>70</u>	(A)			<u>140</u> (B)																																							
Prevalence Index = B/A =					<u>2</u>																																							
1. _____	_____	_____	_____																																									
2. _____	_____	_____	_____																																									
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4. _____	_____	_____	_____																																									
5. _____	_____	_____	_____																																									
6. _____	_____	_____	_____																																									
7. _____	_____	_____	_____																																									
<u>0</u> = Total Cover																																												
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																												
<b>Sapling/Shrub Stratum (Plot size: <u>15</u>)</b>																																												
1. _____	_____	_____	_____																																									
2. _____	_____	_____	_____																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
5. _____	_____	_____	_____																																									
6. _____	_____	_____	_____																																									
7. _____	_____	_____	_____																																									
8. _____	_____	_____	_____																																									
9. _____	_____	_____	_____																																									
<u>0</u> = Total Cover																																												
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																												
<b>Herb Stratum (Plot size: <u>5</u>)</b>																																												
1. <u>Eleocharis intermedia</u>	<u>50</u>	Yes	FACW																																									
2. <u>Juncus effusus</u>	<u>20</u>	Yes	FACW																																									
3. <u>Juncus sp.</u>		No	Obl																																									
4. _____	_____	_____	_____																																									
5. _____	_____	_____	_____																																									
6. _____	_____	_____	_____																																									
7. _____	_____	_____	_____																																									
8. _____	_____	_____	_____																																									
9. _____	_____	_____	_____																																									
10. _____	_____	_____	_____																																									
11. _____	_____	_____	_____																																									
<u>70</u> = Total Cover																																												
50% of total cover: <u>35</u> 20% of total cover: <u>14</u>																																												
<b>Woody Vine Stratum (Plot size: <u>30</u>)</b>																																												
1. _____	_____	_____	_____																																									
2. _____	_____	_____	_____																																									
3. _____	_____	_____	_____																																									
4. _____	_____	_____	_____																																									
5. _____	_____	_____	_____																																									
<u>0</u> = Total Cover																																												
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>																																												
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>																																												
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).																																												



Vegetation 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: Burlington, Alamance ... Sampling Date: 2019-Jan-21  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-B19-168\_PFO-1  
 Investigator(s): Simon King, Simon King, Karla Fortier, Susan Thebert 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: 36.1395516 Long: -79.3803595 Datum: WGS84  
 Soil Map Unit Name: Helena sandy loam, 6 to 10 percent slopes NWI classification:  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation  Soil  or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation  Soil  or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:  Covertypes is PFO.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<b>Primary Indicators (minimum of one is required; check all that apply)</b> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)  <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>	
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:	

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

Sampling Point: W-B19-168\_PFO-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. <u><i>Acer rubrum</i></u>	30	Yes	FAC	Number of Dominant Species That Are OBL, FACW, or FAC:	6 (A)
2. <u><i>Ulmus americana</i></u>	10	Yes	FACW	Total Number of Dominant Species Across All Strata:	6 (B)
3. <u><i>Liquidambar styraciflua</i></u>	10	Yes	FAC	Percent of Dominant Species That Are OBL, FACW, or FAC:	100 (A/B)
4. _____				<b>Prevalence Index worksheet:</b>	
5. _____				<b>Total % Cover of:</b>	<b>Multiply By:</b>
6. _____				OBL species	0 x 1 = 0
7. _____				FACW species	40 x 2 = 80
	50 = Total Cover			FAC species	130 x 3 = 390
50% of total cover: <u>25</u>		20% of total cover: <u>10</u>		FACU species	0 x 4 = 0
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				UPL species	0 x 5 = 0
1. _____				Column Totals	170 (A) 470 (B)
2. _____				Prevalence Index = B/A = <u>2.8</u>	
3. _____				<b>Hydrophytic Vegetation Indicators:</b>	
4. _____				____ 1 - Rapid Test for Hydrophytic Vegetation	
5. _____				<input checked="" type="checkbox"/> 2 - Dominance Test is >50%	
6. _____				<input checked="" type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>	
7. _____				____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
8. _____				____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
9. _____				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
	0 = Total Cover			<b>Definitions of Four Vegetation Strata:</b>	
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>		<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
<b>Herb Stratum</b> (Plot size: <u>5</u> )				<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
1. <u><i>Microstegium vimineum</i></u>	80	Yes	FAC	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
2. <u><i>Juncus effusus</i></u>	30	Yes	FACW	<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
3. _____				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
4. _____					
5. _____					
6. _____					
7. _____					
	110 = Total Cover				
50% of total cover: <u>55</u>		20% of total cover: <u>22</u>			
<b>Woody Vine Stratum</b> (Plot size: <u>30</u> )					
1. <u><i>Toxicodendron radicans</i></u>	10	Yes	FAC		
2. _____					
3. _____					
4. _____					
5. _____					
	10 = Total Cover				
50% of total cover: <u>5</u>		20% of total cover: <u>2</u>			
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>					
A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).					



Hydrology Photos



Vegetation Photos



Soil Photos



Photo of Sample Plot North





Photo of Sample Plot  
East



Photo of Sample Plot  
South





**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: MVP Southgate City/County: Burlington, Alamance ... Sampling Date: 2019-Jan-21  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-B19-168\_UPL-1  
 Investigator(s): Simon King, Simon King Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Undulating Slope (%): 0 to 1  
 Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.1393682 Long: -79.3803059 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:		
Covertypes is UPL.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	
(includes capillary fringe)		
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-B19-168\_UPL-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. <i>Quercus rubra</i>	30	Yes	FACU	Number of Dominant Species That Are OBL, FACW, or FAC:	0 (A)
2. <i>Quercus alba</i>	20	Yes	FACU	Total Number of Dominant Species Across All Strata:	5 (B)
3. <i>Carya glabra</i>	10	No	FACU	Percent of Dominant Species That Are OBL, FACW, or FAC:	0 (A/B)
4. <i>Acer rubrum</i>	10	No	FAC		
5. _____					
6. _____					
7. _____					
	70 = Total Cover				
	50% of total cover: <u>35</u>	20% of total cover: <u>14</u>			
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u> )				<b>Prevalence Index worksheet:</b>	
1. <i>Juniperus virginiana</i>	20	Yes	FACU	<b>Total % Cover of:</b>	<b>Multiply By:</b>
2. _____				OBL species	0 x 1 = 0
3. _____				FACW species	0 x 2 = 0
4. _____				FAC species	10 x 3 = 30
5. _____				FACU species	110 x 4 = 440
6. _____				UPL species	0 x 5 = 0
7. _____				Column Totals	120 (A) 470 (B)
8. _____				Prevalence Index = B/A =	<u>3.9</u>
9. _____					
	20 = Total Cover			<b>Hydrophytic Vegetation Indicators:</b>	
	50% of total cover: <u>10</u>	20% of total cover: <u>4</u>		____ 1 - Rapid Test for Hydrophytic Vegetation	
				____ 2 - Dominance Test is > 50%	
				____ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>	
				____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
				____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
<u>Herb Stratum</u> (Plot size: <u>5</u> )				<b>Definitions of Four Vegetation Strata:</b>	
1. <i>Lonicera japonica</i>	20	Yes	FACU	<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
2. <i>Polystichum acrostichoides</i>	10	Yes	FACU	<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
3. _____				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
4. _____				<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
	30 = Total Cover				
	50% of total cover: <u>15</u>	20% of total cover: <u>6</u>			
<u>Woody Vine Stratum</u> (Plot size: <u>30</u> )				<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
1. _____					
2. _____					
3. _____					
4. _____					
5. _____					
	0 = Total Cover				
	50% of total cover: <u>0</u>	20% of total cover: <u>0</u>			
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>					
No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC– or drier).					



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: Burlington, Alamance ... Sampling Date: 2019-Jan-21  
 Applicant/Owner: NextEra State: North Carolina Sampling Point: W-B19-168\_UPL-2  
 Investigator(s): Joseph Roy, Simon King Section, Township, Range:  
 Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0 to 1  
 Subregion (LRR or MLRA): MLRA 136 of LRR P Lat: 36.1399208 Long: -79.3814725 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:  Covertype is UPL. previously disturbed area. previously disturbed area.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>			<u>Secondary Indicators (minimum of two required)</u>				
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)					
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)					
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)					
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)					
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)					
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)					
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)					
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)					
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)					
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)					
		<input type="checkbox"/> FAC-Neutral Test (D5)					
<b>Field Observations:</b>			<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):				_____	
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):				_____	
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):				_____	
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-B19-168 UPL-2

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: _____	0 (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____	3 (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____	0 (A/B)
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>	
5. _____	_____	_____	_____	<u>Total % Cover of:</u>	<u>Multiply By:</u>
6. _____	_____	_____	_____	OBL species _____	x 1 = _____
7. _____	_____	_____	_____	FACW species _____	x 2 = _____
0 = Total Cover				FAC species _____	x 3 = _____
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				FACU species _____	x 4 = _____
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				UPL species _____	x 5 = _____
1. _____	_____	_____	_____	Column Totals _____	(A) 40 (B)
2. _____	_____	_____	_____	Prevalence Index = B/A = <u>4</u>	
3. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b>	
4. _____	_____	_____	_____	____ 1 - Rapid Test for Hydrophytic Vegetation	
5. _____	_____	_____	_____	____ 2 - Dominance Test is > 50%	
6. _____	_____	_____	_____	____ 3 - Prevalence Index is ≤ 3.0 <sup>1</sup>	
7. _____	_____	_____	_____	____ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
8. _____	_____	_____	_____	____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
9. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
0 = Total Cover				<b>Definitions of Four Vegetation Strata:</b>	
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>				<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
<b>Herb Stratum</b> (Plot size: <u>5</u> )				<b>Sapling/shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
1. <i>Carex sp.</i>	30	Yes	NI	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
2. <i>Solidago canadensis</i>	10	Yes	FACU	<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
3. <i>Poaceae</i>	10	Yes	NI	<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
50 = Total Cover					
50% of total cover: <u>25</u> 20% of total cover: <u>10</u>					
<b>Woody Vine Stratum</b> (Plot size: <u>30</u> )					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
0 = Total Cover					
50% of total cover: <u>0</u> 20% of total cover: <u>0</u>					
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>					
Fallow field.					



Photo of Sample Plot  
North



Photo of Sample Plot  
East



Photo of Sample Plot  
South



Photo of Sample Plot  
West

