

Garner Run
Wetland Data Sheets

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont (DRAFT)

Project/Site: Foundation 404 City/County: Greene County Sampling Date: 4/18/11
 Applicant/Owner: Alpha State: PA Sampling Point: 1
 Investigator(s): B. Armstrong Section, Township, Range: Center Twp.
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none
 Slope (%): _____ Lat: 39.843808 Long: 80.316011 Datum: NAD 27 PA South
 Soil Map Unit Name: Dormant-collected silt loam (Dtd) NWI classification: 85% PEM/15% PSS

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 _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ <u>R-1</u>
Remarks: <i>Heavy rain 48 hrs prior to site visit</i>	

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <input checked="" type="checkbox"/> Surface Water (A1) _____ True Aquatic Plants (B14) _____ High Water Table (A2) _____ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> 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) <input checked="" type="checkbox"/> Other (Explain in Remarks) _____ Iron Deposits (B5) _____ Inundation Visible on Aerial Imagery (B7) _____ Water-Stained Leaves (B9) _____ Aquatic Fauna (B13)	<p><u>Secondary Indicators (minimum of two required)</u></p> _____ Surface Soil Cracks (B6) _____ Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> 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)
<p>Field Observations:</p> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>41"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>surface</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>surface</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: <i>Multiple groundwater discharges present</i>	

VEGETATION – Use scientific names of plants.

Sampling Point: 1

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

Sapling Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Salix nigra</i>	30	Y	FACW
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Leersia oryzoides</i>	30	Y	OBL
2. <i>Impatiens capensis</i>	15	Y	FACW
3. <i>Epilobium ciliatum</i>	6	N	OBL
4. <i>Agrimonia parviflora</i>	5	N	FAC
5. <i>Polygonum sagittatum</i>	2	N	OBL
6. <i>Phalaris arundinacea</i>	2	N	FACW
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

____ Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

____ Prevalence Index is ≤3.0¹

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

____ Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No _____

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

Photo 1 - wetland

Photo 2 - upland

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont (DRAFT)

Project/Site: Foundation 404 City/County: Green Co. Sampling Date: 4/21/11
 Applicant/Owner: Alpha State: PA Sampling Point: F-2
 Investigator(s): B. Armstrong Section, Township, Range: Center Twp
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave
 Slope (%): _____ Lat: 39.852311 Long: 80.315193 Datum: NAD 27 PA South
 Soil Map Unit Name: Newark silt loam (NW) NWI classification: PEM/PSS

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 _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	F-2 Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) _____ True Aquatic Plants (B14) _____ High Water Table (A2) _____ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) _____ Water Marks (B1) _____ Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Sediment Deposits (B2) _____ Recent Iron Reduction in Tilled Soils (C6) <input checked="" type="checkbox"/> 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)	_____ Surface Soil Cracks (B6) _____ Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>3</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>surface</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:	

VEGETATION – Use scientific names of plants.

Sampling Point: F-2

<u>Tree Stratum</u> (Plot size: _____)	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____ (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				Prevalence Index worksheet:
<u>Sapling Stratum</u> (Plot size: _____)				Total % Cover of: _____ Multiply by: _____
1. <u>Salix nigra</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>	OBL species _____ x 1 = _____
2. _____	_____	_____	_____	FACW species _____ x 2 = _____
3. _____	_____	_____	_____	FAC species _____ x 3 = _____
4. _____	_____	_____	_____	FACU species _____ x 4 = _____
5. _____	_____	_____	_____	UPL species _____ x 5 = _____
6. _____	_____	_____	_____	Column Totals: _____ (A) _____ (B)
7. _____	_____	_____	_____	Prevalence Index = B/A = _____
_____ = Total Cover				Hydrophytic Vegetation Indicators:
<u>Shrub Stratum</u> (Plot size: _____)				<input checked="" type="checkbox"/> Rapid Test for Hydrophytic Vegetation
1. _____	_____	_____	_____	___ Dominance Test is >50%
2. _____	_____	_____	_____	___ Prevalence Index is ≤3.0 ¹
3. _____	_____	_____	_____	___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. _____	_____	_____	_____	___ Problematic Hydrophytic Vegetation ¹ (Explain)
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
_____ = Total Cover				Definitions of Vegetation Strata:
<u>Herb Stratum</u> (Plot size: _____)				Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
1. <u>Phalaris arundinacea</u>	<u>46</u>	<u>Y</u>	<u>FACW</u>	Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
2. _____	_____	_____	_____	Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
3. _____	_____	_____	_____	Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.
4. _____	_____	_____	_____	Woody vine – All woody vines, regardless of height.
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
_____ = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____

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

SOIL

Sampling Point: F-2

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7	10YR 4/3	100					silty loam	
7-18	10YR 5/2	98	7.5YR 5/6	2	C	PL	silty loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

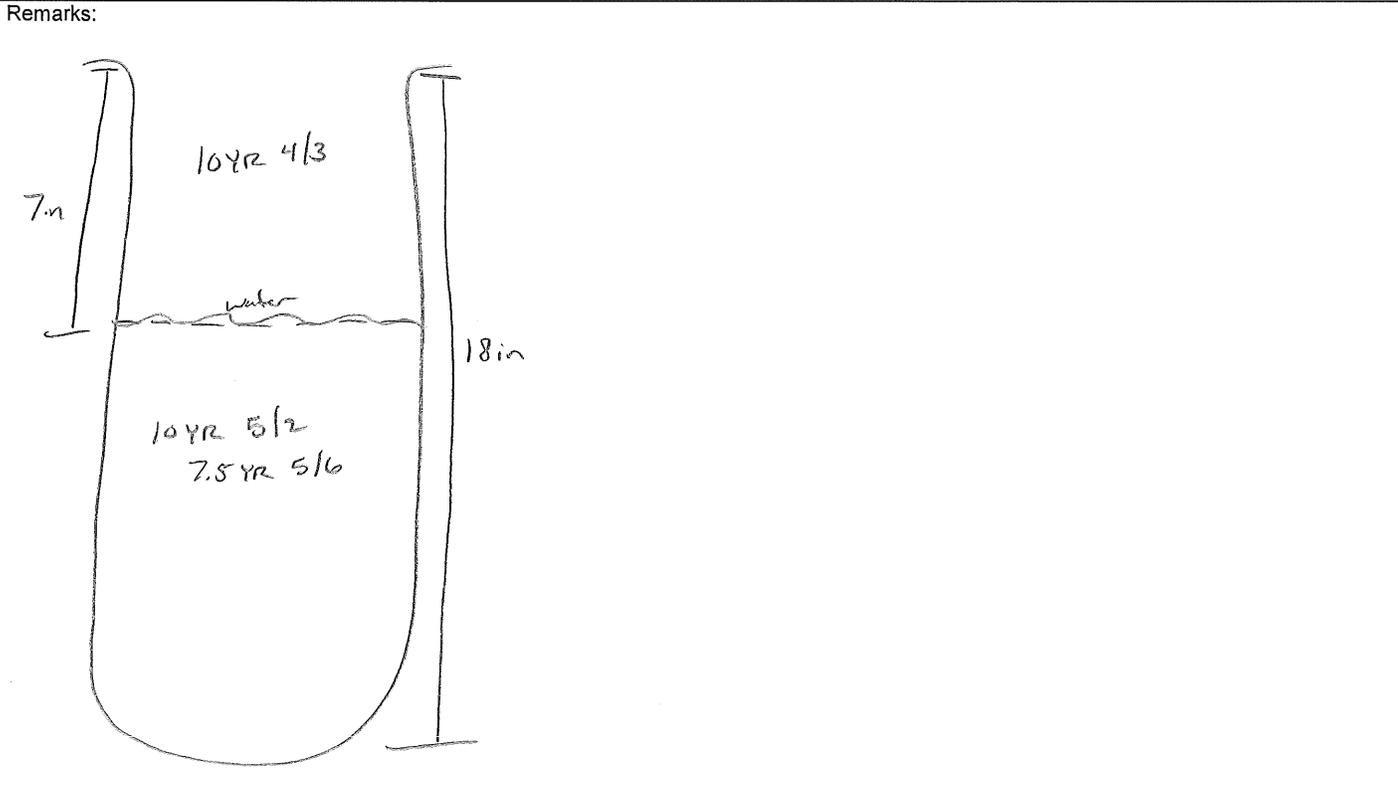
- | | |
|--|---|
| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils³: |
| <input type="checkbox"/> Histosol (A1)
<input type="checkbox"/> Histic Epipedon (A2)
<input type="checkbox"/> Black Histic (A3)
<input type="checkbox"/> Hydrogen Sulfide (A4)
<input type="checkbox"/> Stratified 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) |

- 2 cm Muck (A10) (MLRA 147)
- Piedmont Floodplain Soils (F19) (MLRA 136, 147)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Foundation Mine City/County: Greene Sampling Date: 5.31.2011
 Applicant/Owner: Alpha State: PA Sampling Point: F-71
 Investigator(s): CWAG, Karin Gebig Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Fl. slope Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR or MLRA): _____ Lat: 39.849794 Long: -80.319501 Datum: _____
 Soil Map Unit Name: D0D, D+F NWI classification: 100% PFM
 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 _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: <u>F-71</u> <u>Delineated with ACOE during JD fieldview</u>	

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> ___ Surface Water (A1) ___ True Aquatic Plants (B14) ___ High Water Table (A2) ___ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input checked="" type="checkbox"/> 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)	<p><u>Secondary Indicators (minimum of two required)</u></p> ___ 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)
<p>Field Observations:</p> 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 <input checked="" type="checkbox"/> No _____ Depth (inches): _____	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: F-71

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: _____)				
1. <u>Eupatorium perfoliatum</u>	_____	_____	_____	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Epilobium coloratum</u>	_____	_____	_____	
3. <u>Carex spp.</u>	_____	_____	_____	
4. <u>Solidago spp.</u>	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: F-71

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 4/3	100					Lo-M	
5-12	10YR 5/2	95	7.5 YR 3/4	5	C	M	Clay L-M	

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

- | | | |
|--|--|--|
| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils³: |
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) | <input type="checkbox"/> Coast Prairie Redox (A16) (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"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Stratified Layers (A5) | <input checked="" type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <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) | | |

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

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

A hand-drawn soil profile diagram showing a 12-inch depth. The top 5 inches are labeled '10YR 4/3'. The bottom 7 inches are labeled '10YR 5/2' and '7.5 YR 3/4'. A 5-inch depth is also indicated on the left side.



Routine Wetland Determination

DATA FORM

Based upon 1987 Corps Wetland Delineation Manual

Project/Site: Foundation Rail Siding & Prep Plant	Date: 5/12/2008
Applicant/owner:	County: Greene
Investigator(s): BKA	State: PA
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: Wetland H Transect ID: PEM/PFO Plot ID:
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Explanation of atypical or problem area:	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species (Common Name)	Dominant Plant Species (Scientific Name)	Strata	Indicator Status
Box elder	<i>Acer negundo</i>	T	FAC+
Black willow	<i>Salix nigra</i>	T	FACW+
Soft rush	<i>Juncus effusus</i>	H	FACW+
Sensitive fern	<i>Onoclea sensibilis</i>	H	FACW

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100

Check all indicators that apply and explain below:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation | <input type="checkbox"/> Physiological/reproductive adaptations |
| <input type="checkbox"/> Morphological adaptations | <input checked="" type="checkbox"/> Wetland plant database |
| <input type="checkbox"/> Technical Literature | <input checked="" type="checkbox"/> Personal knowledge of regional plant communities |
| | <input type="checkbox"/> Other (explain) |

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks: Greater than 50% of dominant vegetation is OBL, FACW, or FAC.

HYDROLOGY

Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Water Marks: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>on stems, ground</i>	Sediment Deposits: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)	Drift Lines: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Drainage Patterns: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth of inundation: 30 inches	Oxidized Root (live roots) Channels <12in.: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Local Soil Survey: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth to free water in pit: inches	FAC Neutral: <input type="checkbox"/> Yes <input type="checkbox"/> No	Water-stained Leaves: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth to saturated soil:	Other (explain): AutoCAD topographic mapping	
Check all that apply & explain below: <input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input checked="" type="checkbox"/> Other		

Wetland hydrology present? Yes No

Rationale for decision/remarks: Observed evidence of hydrology.

Routine Wetland Determination

DATA FORM

Based upon 1987 Corps Wetland Delineation Manual

SOILS

Map Unit Name (Series and Phase) : Dormont silt loam (DoD)

Drainage Class

Taxonomy (subgroup)

Field observations confirm mapped type? Yes No

Hydric Soil Indicators: (check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Histosol | <input type="checkbox"/> Matrix chroma ≤ 2 with mottles |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> Mg or Fe Concretions |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils |
| <input type="checkbox"/> Aquic Moisture Regime | <input type="checkbox"/> Organic Streaking in Sandy Soils |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National/Local Hydric Soils List |
| <input checked="" type="checkbox"/> Gleyed or Low-Chroma (=1) matrix | <input type="checkbox"/> Other (explain in remarks) |

Soil Matrix: 2.5Y 4/1

Soil Mottle:

Hydric soils present? Yes No

Rationale for decision/Remarks: Hydric soil chromatic criteria met.

Wetland Determination

Hydrophytic vegetation present? Yes No

Hydric soils present? Yes No

Wetland hydrology present? Yes No

Is the sampling point within a wetland? Yes No

Rationale/Remarks: All three wetland criteria met.

Photo: Wetland H





Routine Wetland Determination

DATA FORM

Based upon 1987 Corps Wetland Delineation Manual

Project/Site: Foundation Rail Siding & Prep Plant	Date: 5/12/2008
Applicant/owner:	County: Greene
Investigator(s): BKA	State: PA
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: Wetland I Transect ID: PEM/PFO/POW Plot ID:
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Explanation of atypical or problem area:	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species (Common Name)	Dominant Plant Species (Scientific Name)	Strata	Indicator Status
Soft rush	<i>Juncus effusus</i>	H	FACW+
Reed canary grass	<i>Phalaris arundinacea</i>	H	FACW+
Common blue violet	<i>Viola papilionacea</i>	H	FAC
Black willow	<i>Salix nigra</i>	T	FACW+
Sensitive fern	<i>Onoclea sensibilis</i>	H	FACW
Spotted touch-me-not	<i>Impatiens capensis</i>	H	FACW

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100

Check all indicators that apply and explain below:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation | <input type="checkbox"/> Physiological/reproductive adaptations |
| <input checked="" type="checkbox"/> Morphological adaptations | <input checked="" type="checkbox"/> Wetland plant database |
| <input type="checkbox"/> Technical Literature | <input checked="" type="checkbox"/> Personal knowledge of regional plant communities |
| | <input type="checkbox"/> Other (explain) |

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks: Greater than 50% of dominant vegetation is OBL, FACW, or FAC.

HYDROLOGY

Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Water Marks: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>on stems, ground</i>	Sediment Deposits: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)	Drift Lines: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Drainage Patterns: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth of inundation: >24 inches	Oxidized Root (live roots) Channels <12in.: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Local Soil Survey: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth to free water in pit: inches	FAC Neutral: <input type="checkbox"/> Yes <input type="checkbox"/> No	Water-stained Leaves: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth to saturated soil:	Other (explain): AutoCAD topographic mapping	
Check all that apply & explain below: <input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input checked="" type="checkbox"/> Other		

Wetland hydrology present? Yes No

Rationale for decision/remarks: Observed evidence of hydrology.

Routine Wetland Determination

DATA FORM

Based upon 1987 Corps Wetland Delineation Manual

SOILS

Map Unit Name (Series and Phase) : Dormont silt loam (DoD)

Drainage Class

Taxonomy (subgroup)

Field observations confirm mapped type? Yes No

Hydric Soil Indicators: (check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Histosol | <input checked="" type="checkbox"/> Matrix chroma \leq 2 with mottles |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> Mg or Fe Concretions |
| <input checked="" type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils |
| <input type="checkbox"/> Aquic Moisture Regime | <input type="checkbox"/> Organic Streaking in Sandy Soils |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National/Local Hydric Soils List |
| <input checked="" type="checkbox"/> Gleyed or Low-Chroma (=1) matrix | <input type="checkbox"/> Other (explain in remarks) |

Soil Matrix: Gley 4N

Soil Mottle: 5YR 6/8

Hydric soils present? Yes No

Rationale for decision/Remarks: Hydric soil chromatic criteria met with the presence of mottles.

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks: All three wetland criteria met.

Photo: Wetland I





Routine Wetland Determination

DATA FORM

Based upon 1987 Corps Wetland Delineation Manual

Project/Site: Foundation Rail Siding & Prep Plant	Date: 5/12/2008
Applicant/owner:	County: Greene
Investigator(s): BKA	State: PA
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: Wetland J Transect ID: PEM Plot ID:
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Explanation of atypical or problem area:	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species (Common Name)	Dominant Plant Species (Scientific Name)	Strata	Indicator Status
Stiff marsh bedstraw	<i>Galium tinctorium</i>	H	OBL
Spotted touch-me-not	<i>Impatiens capensis</i>	H	FACW
Common blue violet	<i>Viola papilionacea</i>	H	FAC

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100

Check all indicators that apply and explain below:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation | <input type="checkbox"/> Physiological/reproductive adaptations |
| <input type="checkbox"/> Morphological adaptations | <input checked="" type="checkbox"/> Wetland plant database |
| <input type="checkbox"/> Technical Literature | <input checked="" type="checkbox"/> Personal knowledge of regional plant communities |
| | <input type="checkbox"/> Other (explain) |

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks: Greater than 50% of dominant vegetation is OBL, FACW, or FAC.

HYDROLOGY

Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Water Marks: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>on stems, ground</i>	Sediment Deposits: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)	Drift Lines: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Drainage Patterns: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth of inundation: _____ inches	Oxidized Root (live roots) Channels <12in.: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Local Soil Survey: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth to free water in pit: _____ inches	FAC Neutral: <input type="checkbox"/> Yes <input type="checkbox"/> No	Water-stained Leaves: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth to saturated soil: _____	Other (explain): AutoCAD topographic mapping	
Check all that apply & explain below: <input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input checked="" type="checkbox"/> Other		

Wetland hydrology present? Yes No

Rationale for decision/remarks: Observed evidence of hydrology.

Routine Wetland Determination

DATA FORM

Based upon 1987 Corps Wetland Delineation Manual

SOILS

Map Unit Name (Series and Phase) : Dormont silt loam (DoD)

Drainage Class

Taxonomy (subgroup)

Field observations confirm mapped type? Yes No

Hydric Soil Indicators: (check all that apply)

- | | |
|---|---|
| <input type="checkbox"/> Histosol | <input checked="" type="checkbox"/> Matrix chroma \leq 2 with mottles |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> Mg or Fe Concretions |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils |
| <input type="checkbox"/> Aquic Moisture Regime | <input type="checkbox"/> Organic Streaking in Sandy Soils |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National/Local Hydric Soils List |
| <input type="checkbox"/> Gleyed or Low-Chroma (=1) matrix | <input type="checkbox"/> Other (explain in remarks) |

Soil Matrix: 10YR 4/1

Soil Mottle: 7.5YR 6/8

Hydric soils present? Yes No

Rationale for decision/Remarks: Hydric soil chromatic criteria met with the presence of mottles.

Wetland Determination

Hydrophytic vegetation present? Yes No

Hydric soils present? Yes No

Wetland hydrology present? Yes No

Is the sampling point within a wetland? Yes No

Rationale/Remarks: All three wetland criteria met.

Photo: Wetland J



40649 W.I

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont (DRAFT)

Project/Site: Foundation Surface Facility / Freshwater Impoundment City/County: Greene County Sampling Date: 6/2/2010
 Applicant/Owner: Foundation Mining LLC State: PA Sampling Point: 1
 Investigator(s): B. Armstrong, B. Burford Section, Township, Range: Sackson Township
 Landform (hillslope, terrace, etc.): terrace (old road) Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Dormant silt loam (Dol), Dormant-Colluvial silt loam (Dtd) NWI classification: 85% PEM/15% PSS
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil X, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 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 <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: <u>Old road traverses the hillside. Many areas have hydrophytic veg, but soils not present. This one location contains soils at the headwater of a stream.</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____ (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Salix nigra</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species _____ x 3 = _____
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
<u>15</u> = Total Cover				UPL species _____ x 5 = _____
_____ = Total Cover				Column Totals: _____ (A) _____ (B)
Prevalence Index = B/A = _____				
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Equisetum spp</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>	<u>X</u> Rapid Test for Hydrophytic Vegetation
2. <u>Typha latifolia</u>	<u>10</u>	<u>Y</u>	<u>OBL</u>	_____ Dominance Test is >50%
3. <u>Carex stipata</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	_____ Prevalence Index is ≤3.0 ¹
4. <u>Lappula cupensis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	_____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5. <u>Eupatorium perfoliatum</u>	<u>1</u>	<u>N</u>	<u>FACW</u>	_____ Problematic Hydrophytic Vegetation ¹ (Explain)
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
<u>36</u> = Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. _____	_____	_____	_____	Yes <u>X</u> No _____
2. _____	_____	_____	_____	
_____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.) <u>pic #1</u> <u>#12</u>				

SOIL

Sampling Point: 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 ¹	Loc ²		
0-9	10YR 6/8	100		5			Clay	
9-14	10YR 5/1	95	10YR 5/6	5	C	PL	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

<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"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)	<input type="checkbox"/> Red Parent Material (TF2)
<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)		

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

Restrictive Layer (if observed):
 Type: Rock
 Depth (inches): 14 inches

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

<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 checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input checked="" 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)	

Secondary Indicators (minimum of two required)

<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 type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes No Depth (inches): 1

Water Table Present? Yes No Depth (inches): 6

Saturation Present? Yes No Depth (inches): Surface

(includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont (DRAFT)

Project/Site: Foundation Surface Facility / Freshwater Impoundment City/County: Greene County Sampling Date: 6/2/2010
 Applicant/Owner: Foundation Mining LLC State: PA Sampling Point: 2
 Investigator(s): B. Armstrong, B. Buford Section, Township, Range: Jackson Township
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none
 Slope (%): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Dorment - Colleeka silt loam (DfD) 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:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40</u> (A/B)
1. <u>Ulmus rubra</u>	<u>5</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Acer saccharum</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Liriodendron tulipifera</u>	<u>2</u>	<u>N</u>	<u>FACU</u>	
4. <u>Ailanthus altissima</u>	<u>1</u>	<u>N</u>	<u>FACU</u>	
5. _____				
	<u>13</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species <u>11</u> x 2 = <u>22</u> FAC species <u>10</u> x 3 = <u>30</u> FACU species <u>47</u> x 4 = <u>188</u> UPL species _____ x 5 = _____ Column Totals: <u>168</u> (A) <u>240</u> (B) Prevalence Index = B/A = <u>3.5</u>
1. <u>Rosa multiflora</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Lindera benzoin</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
3. <u>Salix nigra</u>	<u>1</u>	<u>N</u>	<u>FACW</u>	
4. <u>Liriodendron tulipifera</u>	<u>1</u>	<u>N</u>	<u>FACU</u>	
5. <u>Rubus spp.</u>	<u>1</u>	<u>N</u>	<u>NI</u>	
	<u>18</u>	= Total Cover		
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: ____ Rapid Test for Hydrophytic Vegetation ____ Dominance Test is >50% ____ Prevalence Index is ≤3.0 ¹ ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Urtica dioica</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Thelypteris noveboracensis</u>	<u>2</u>	<u>N</u>	<u>FAC</u>	
3. <u>Solidago spp.</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
4. <u>Impatiens capensis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
5. <u>Polystichum acrostichoides</u>	<u>1</u>	<u>N</u>	<u>FACU</u>	
6. <u>Glechoma hederacea</u>	<u>1</u>	<u>N</u>	<u>FAC</u>	
7. <u>Galium aparine</u>	<u>1</u>	<u>N</u>	<u>FACU</u>	
8. _____				
9. _____				
10. _____				
	<u>35</u>	= Total Cover		
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
1. <u>Toxicodendron radicans</u>	<u>2</u>	<u>Y</u>	<u>FAC</u>	
2. _____				
	<u>2</u>	= Total Cover		
Remarks: (Include photo numbers here or on a separate sheet.) <u>pic #3</u> <u>#4</u>				

SOIL

Sampling Point: 2

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	7.5 YR 5/4	100					Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Red Parent Material (TF2)
<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)	

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

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<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"/> True Aquatic Plants (B14)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations: 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)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
--	---

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

Remarks:

Grinage Run
Wetland Data Sheets



Routine Wetland Determination

DATA FORM

Based upon 1987 Corps Wetland Delineation Manual

Project/Site: Foundation Rail Siding & Prep Plant	Date: 5/20/2008
Applicant/owner:	County: Greene
Investigator(s): BKA	State: PA
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: Wetland GRI-1 Transect ID: PEM Plot ID:
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Explanation of atypical or problem area:	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species (Common Name)	Dominant Plant Species (Scientific Name)	Strata	Indicator Status
Reed canary grass	<i>Phalaris arundinacea</i>	H	FACW+
Tussock sedge	<i>Carex stricta</i>	H	OBL
Wool-grass	<i>Scirpus cyperinus</i>	H	FACW+
Black willow	<i>Salix nigra</i>	S	FACW+
Soft rush	<i>Juncus effusus</i>	H	FACW+
Spotted touch-me-not	<i>Impatiens capensis</i>	H	FACW

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100%

Check all indicators that apply and explain below:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation | <input type="checkbox"/> Physiological/reproductive adaptations |
| <input type="checkbox"/> Morphological adaptations | <input checked="" type="checkbox"/> Wetland plant database |
| <input type="checkbox"/> Technical Literature | <input checked="" type="checkbox"/> Personal knowledge of regional plant communities |
| | <input type="checkbox"/> Other (explain) |

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks: Greater than 50% of dominant vegetation is OBL, FACW, or FAC.

HYDROLOGY

Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Water Marks: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>on stems, ground</i>	Sediment Deposits: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)	Drift Lines: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Drainage Patterns: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth of inundation: _____ inches	Oxidized Root (live roots) Channels <12in.: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Local Soil Survey: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth to free water in pit: _____ inches	FAC Neutral: <input type="checkbox"/> Yes <input type="checkbox"/> No	Water-stained Leaves: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Depth to saturated soil: _____	Other (explain): AutoCAD topographic mapping	
Check all that apply & explain below: <input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input checked="" type="checkbox"/> Other		

Wetland hydrology present? Yes No

Rationale for decision/remarks: Observed evidence of hydrology.

Routine Wetland Determination

DATA FORM

Based upon 1987 Corps Wetland Delineation Manual

SOILS

Map Unit Name (Series and Phase) :Fluvaquents, loamy (Fa)

Drainage Class

Taxonomy (subgroup)

Field observations confirm mapped type? Yes No

Hydric Soil Indicators: (check all that apply)

- | | |
|--|--|
| <input type="checkbox"/> Histosol | <input checked="" type="checkbox"/> Matrix chroma \leq 2 with mottles |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> Mg or Fe Concretions |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils |
| <input type="checkbox"/> Aquic Moisture Regime | <input type="checkbox"/> Organic Streaking in Sandy Soils |
| <input type="checkbox"/> Reducing Conditions | <input checked="" type="checkbox"/> Listed on National/Local Hydric Soils List |
| <input checked="" type="checkbox"/> Gleyed or Low-Chroma (=1) matrix | <input type="checkbox"/> Other (explain in remarks) |

Soil Matrix: 10YR 4/1

Soil Mottle: 7.5YR 6.8

Hydric soils present? Yes No

Rationale for decision/Remarks: Hydric soil chromatic criteria met with the presence of mottles.

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks: All three wetland criteria met.

Photo:





Routine Wetland Determination

DATA FORM

Based upon 1987 Corps Wetland Delineation Manual

Project/Site: Foundation Railsiding & Prep Plant	Date: 12/16/2008
Applicant/owner:	County: Greene
Investigator(s): BKA	State: PA
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: Wetland M Transect ID: PEM/PSS/PFO Plot ID:
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Explanation of atypical or problem area:	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species (Common Name)	Dominant Plant Species (Scientific Name)	Strata	Indicator Status
Soft rush	<i>Juncus effusus</i>	H	FACW+
Arrow-leaf tearthumb	<i>Polygonum sagittatum</i>	H	OBL
Multi-flora rose	<i>Rosa multiflora</i>	S	FACU
Black willow	<i>Salix nigra</i>	T	FACW+
Sensitive fern	<i>Onoclea sensibilis</i>	H	FACW
Deer-tongue witchgrass	<i>Dichanthelium clandestinum</i>	H	FAC+

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 83%

Check all indicators that apply and explain below:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation | <input type="checkbox"/> Physiological/reproductive adaptations |
| <input type="checkbox"/> Morphological adaptations | <input checked="" type="checkbox"/> Wetland plant database |
| <input type="checkbox"/> Technical Literature | <input checked="" type="checkbox"/> Personal knowledge of regional plant communities |
| | <input type="checkbox"/> Other (explain) |

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks: Greater than 50% of dominant vegetation is OBL, FACW, or FAC.

HYDROLOGY

Is it the growing season? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Marks: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>on stems, ground</i>	Sediment Deposits: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)	Drift Lines: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Drainage Patterns: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth of inundation: _____ inches	Oxidized Root (live roots) Channels <12in.: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Local Soil Survey: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth to free water in pit: _____ inches	FAC Neutral: <input type="checkbox"/> Yes <input type="checkbox"/> No	Water-stained Leaves: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth to saturated soil: _____	Other (explain): AutoCAD topographic mapping	
Check all that apply & explain below: <input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input checked="" type="checkbox"/> Other		

Wetland hydrology present? Yes No

Rationale for decision/remarks: Observed evidence of hydrology.

Routine Wetland Determination

DATA FORM

Based upon 1987 Corps Wetland Delineation Manual

SOILS

Map Unit Name (Series and Phase) :

Drainage Class

Taxonomy (subgroup)

Field observations confirm mapped type? Yes No

Hydric Soil Indicators: (check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Histosol | <input checked="" type="checkbox"/> Matrix chroma \leq 2 with mottles |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> Mg or Fe Concretions |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils |
| <input type="checkbox"/> Aquic Moisture Regime | <input type="checkbox"/> Organic Streaking in Sandy Soils |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National/Local Hydric Soils List |
| <input checked="" type="checkbox"/> Gleyed or Low-Chroma (=1) matrix | <input type="checkbox"/> Other (explain in remarks) |

Soil Matrix: 10YR 5/1

Soil Mottle: 7.5YR 7/8

Hydric soils present? Yes No

Rationale for decision/Remarks: Hydric soil chromatic criteria met with the presence of mottles.

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks: All three wetland criteria met.

Photo:



Hoge Run
Wetland Data Sheets

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont (DRAFT)

Project/Site: R-3 City/County: Greene Co. Sampling Date: 4/28/11
 Applicant/Owner: Altku State: PA Sampling Point: F-16
 Investigator(s): B. Armstrong Section, Township, Range: Center Twp.
 Landform (hillslope, terrace, etc.): Top of slope Local relief (concave, convex, none): none
 Slope (%): _____ Lat: 39.875124 Long: 80.344843 Datum: NAD 27 PA South
 Soil Map Unit Name: Dormant silt loam (DcD) NWI classification: PEM

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

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

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

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) _____ True Aquatic Plants (B14) _____ High Water Table (A2) _____ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> 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)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) <input checked="" type="checkbox"/> Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
--	--

Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>1/2</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>Surface</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:
 #9 - wetland
 #10 - upland

VEGETATION – Use scientific names of plants.

Sampling Point: F-16

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

Sapling Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Leersia oryzoides</u>	<u>15</u>	<u>Y</u>	<u>OBL</u>
2. <u>Impatiens capensis</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>
3. <u>Carex spp.</u>	<u>3</u>	<u>N</u>	<u>FACW</u>
4. <u>Epilobium coloratum</u>	<u>1</u>	<u>N</u>	<u>OBL</u>
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

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

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

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

SOIL

Sampling Point: F-16

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 5/3	100					silt loam	
4-16	10YR 5/2	98	10YR 6/6	2	C	PL	silt loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: **Indicators for Problematic Hydric Soils³:**

- | | | |
|--|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> Red Parent Material (TF2) |
| <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) | | |

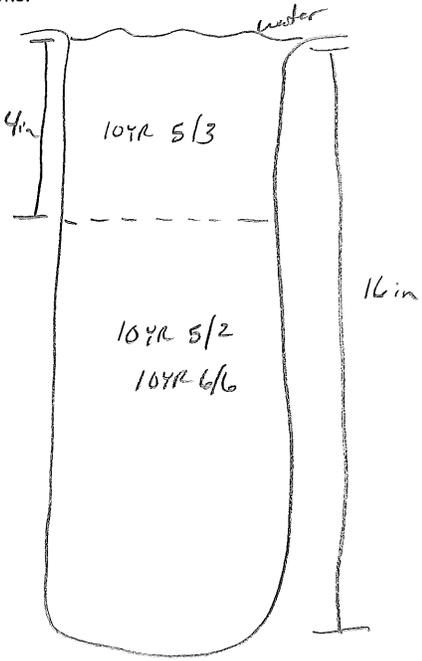
³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont (DRAFT)

Project/Site: R-3 City/County: Greene Co. Sampling Date: 4/28/11
 Applicant/Owner: Alpha State: PA Sampling Point: F-19
 Investigator(s): B. Armstrong Section, Township, Range: Center Twp
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): none
 Slope (%): _____ Lat: 39.071404 Long: 80.335551 Datum: NAD 27 PA South
 Soil Map Unit Name: Dormant-colleeka silt loam (D4F) NWI classification: PEM

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

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

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

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <input checked="" type="checkbox"/> Surface Water (A1) _____ True Aquatic Plants (B14) _____ High Water Table (A2) _____ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) _____ Water Marks (B1) <input checked="" type="checkbox"/> 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)	<p><u>Secondary Indicators (minimum of two required)</u></p> _____ Surface Soil Cracks (B6) _____ Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> 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)
<p>Field Observations:</p> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>1/2</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>Surface</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: #7 - wetland #8 - upland	

VEGETATION – Use scientific names of plants.

Sampling Point: F-19

<u>Tree Stratum</u> (Plot size: _____)	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	Dominance Test worksheet:
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. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				
<u>Sapling Stratum</u> (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				
<u>Shrub Stratum</u> (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				
<u>Herb Stratum</u> (Plot size: _____)				
1. <u>Carex spp.</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Juncus effusus</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Dipsacus sylvestris</u>	<u>3</u>	<u>N</u>	<u>NI</u>	
4. <u>Onoclea sensibilis</u>	<u>2</u>	<u>N</u>	<u>FACW</u>	
5. <u>Eupatorium perfoliatum</u>	<u>1</u>	<u>N</u>	<u>FACW</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>36</u> = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Definitions of Vegetation Strata: Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine – All woody vines, regardless of height.				
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

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

34
2

7.2

SOIL

Sampling Point: F-19

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 4/2	100					silt loam	
2-10	10YR 6/1	90	10YR 6/8	10	C	PL	silt loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) (LRR N)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) (MLRA 147, 148)
- Thin Dark Surface (S9) (MLRA 147, 148)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) (LRR N, MLRA 136)
- Umbric Surface (F13) (MLRA 136, 122)
- Piedmont Floodplain Soils (F19) (MLRA 148)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (MLRA 147)
- Piedmont Floodplain Soils (F19) (MLRA 136, 147)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

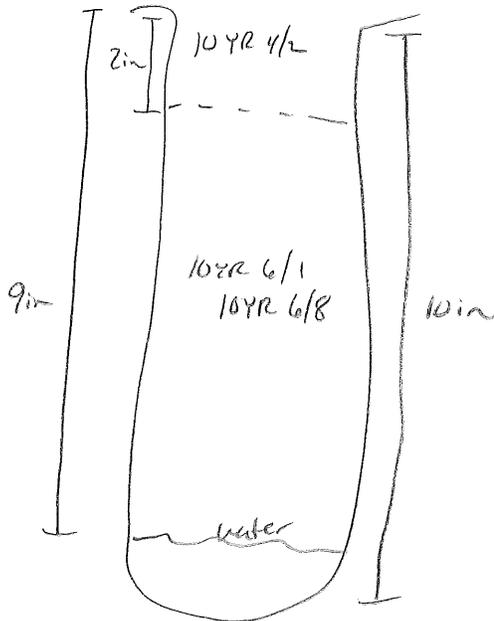
³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Rock
 Depth (inches): 10

Hydric Soil Present? Yes X No

Remarks:



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont (DRAFT)

Project/Site: Foundation 404 City/County: Greene Co. Sampling Date: 4/19/11
 Applicant/Owner: Alpha State: PA Sampling Point: F20
 Investigator(s): B. Armstrong Section, Township, Range: Center Twp
 Landform (hillslope, terrace, etc.): Flats/old pond Local relief (concave, convex, none): Concave
 Slope (%): _____ Lat: 39.869299 Long: 80.3302 Datum: NAD 27 PA South
 Soil Map Unit Name: Desmont silt loam (Dob) NWI classification: PEM/PSS

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

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

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

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> ___ Surface Water (A1) ___ True Aquatic Plants (B14) ___ High Water Table (A2) ___ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> 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) <input checked="" type="checkbox"/> 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)	<p><u>Secondary Indicators (minimum of two required)</u></p> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> 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)
<p>Field Observations:</p> 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>surface</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: <u>Heavy rain</u>	

VEGETATION – Use scientific names of plants.

Sampling Point: F-20

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

Sapling Stratum (Plot size: _____)	_____ = Total Cover		
1. <u>Salix nigra</u>	<u>2</u>	<u>N</u>	<u>FACW</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Shrub Stratum (Plot size: _____)	_____ = Total Cover		
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Herb Stratum (Plot size: _____)	_____ = Total Cover		
1. <u>Leersia oryzoides</u>	<u>60</u>	<u>Y</u>	<u>OBL</u>
2. <u>Juncus effusus</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>
3. <u>Carex spp.</u>	<u>5</u>	<u>N</u>	<u>FACW</u>
4. <u>Eupatorium perfoliatum</u>	<u>2</u>	<u>N</u>	<u>FACW</u>
5. <u>Bitter dock</u>	<u>2</u>	<u>N</u>	<u>FACW</u>
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

Woody Vine Stratum (Plot size: _____)	_____ = Total Cover		
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

___ Prevalence Index is ≤3.0¹

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

___ Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No _____

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

$$\begin{array}{r} 89 \\ + 2 \\ \hline 17.8 \end{array}$$

SOIL

Sampling Point: F-20

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 6/1	90	7.5 YR 6/6	10	C	PL	6" ^{silty} clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

- | | | |
|--|--|--|
| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils³: |
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> Red Parent Material (TF2) |
| <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) | | |

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

Restrictive Layer (if observed):
 Type: Rock
 Depth (inches): 6

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont (DRAFT)

Project/Site: Foundation 404 City/County: Greene Co Sampling Date: 4/19/11
 Applicant/Owner: Alpha State: PA Sampling Point: F-21
 Investigator(s): B. Armstrong Section, Township, Range: Center Twp
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 39.86898 Long: 80.329485 Datum: NAD 27 PA South
 Soil Map Unit Name: Dormant - culleaks silt loams (D+F) NWI classification: PEM

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

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

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

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1) _____ True Aquatic Plants (B14) _____ High Water Table (A2) _____ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> 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) <input checked="" type="checkbox"/> 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)	_____ Surface Soil Cracks (B6) _____ Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>1/2</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>Surface</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: <u>Heavy rain</u>	

VEGETATION – Use scientific names of plants.

Sampling Point: F-21

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	_____ = Total Cover			
Sapling Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	_____ = Total Cover			
Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	_____ = Total Cover			
Herb Stratum (Plot size: _____)				
1. <u>Carex spp.</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Juncus effusus</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Grasses</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>	
4. <u>Mentha piperita</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
5. <u>Eupatorium perfoliatum</u>	<u>2</u>	<u>N</u>	<u>FACW</u>	
6. <u>Dipsacus sylvestris</u>	<u>1</u>	<u>N</u>	<u>NI (FACW)</u>	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
	<u>68</u> = Total Cover			
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
	_____ = Total Cover			

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

___ Prevalence Index is ≤3.0¹

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

___ Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No _____

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

68 68
.5 .2
34.0 13.6

SOIL

Sampling Point: F-21

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 6/2	96	10YR 6/4	4	C	PL	loam	
6-12	10YR 6/1	92	7.5YR 6/8	8	C	PL	subclay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (MLRA 147)
- Piedmont Floodplain Soils (F19) (MLRA 136, 147)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

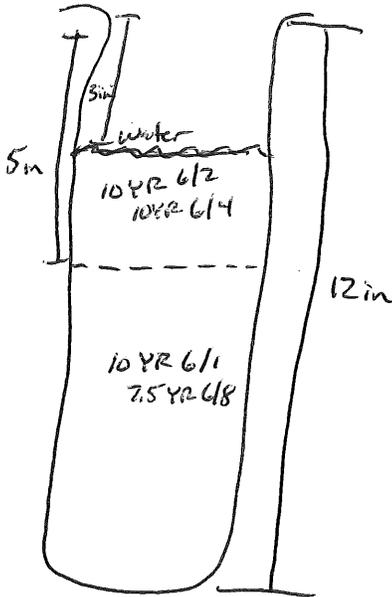
³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Rock
 Depth (inches): 12

Hydric Soil Present? Yes No

Remarks:



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont (DRAFT)

Project/Site: Foundation 404 City/County: Greene Co Sampling Date: 4/19/11
 Applicant/Owner: Alpha State: PA Sampling Point: F-22
 Investigator(s): B. Armstrong Section, Township, Range: Center Twp
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none
 Slope (%): _____ Lat: 39.86885 Long: 80.309241 Datum: NAD 27 PA South
 Soil Map Unit Name: Dormant-colleokes silt loams (D1F) NWI classification: PEM / PSS

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 _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes _____ No _____
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) _____ True Aquatic Plants (B14) _____ High Water Table (A2) <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> 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) <input checked="" type="checkbox"/> 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)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>1/2</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>Surface</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: <u>Heavy rain</u>	

VEGETATION – Use scientific names of plants.

Sampling Point: F-22

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
				_____ = Total Cover
Sapling Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
				_____ = Total Cover
Shrub Stratum (Plot size: _____)				
1. <u>Rosa multiflora</u>	<u>2</u>	<u>N</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
				<u>2</u> = Total Cover
Herb Stratum (Plot size: _____)				
1. <u>Carex spp.</u>	<u>35</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Juncus effusus</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Grasses</u>	<u>7</u>	<u>N</u>	<u>FACU</u>	
4. <u>Dipsacus sylvestris</u>	<u>2</u>	<u>N</u>	<u>NI (FACU)</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
				<u>59</u> = Total Cover
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
				_____ = Total Cover

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

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

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

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

59
.2
11.8

SOIL

Sampling Point: F-22

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	Gley 5/5B	100					Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: Indicators for Problematic Hydric Soils³:

- | | | |
|--|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> (MLRA 136, 147) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input checked="" type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <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) | | |

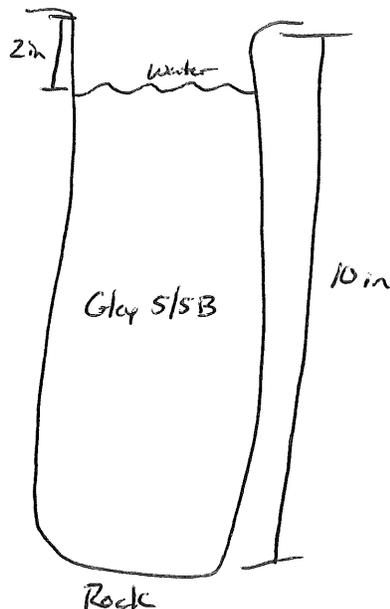
³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Rock
 Depth (inches): 10

Hydric Soil Present? Yes No

Remarks:



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont (DRAFT)

Project/Site: Foundation 404 City/County: Greene Co. Sampling Date: 4/19/11
 Applicant/Owner: Alpha State: PA Sampling Point: F-23
 Investigator(s): B. Armstrong Section, Township, Range: Center Twp
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none
 Slope (%): _____ Lat: 39.869237 Long: 80.331018 Datum: NAD 27 PA South
 Soil Map Unit Name: Dormant silt loams (DdD), Dormant-Colluvial silt loams (D+F) NWI classification: PEM

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	F-23 Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <input checked="" type="checkbox"/> Surface Water (A1) _____ True Aquatic Plants (B14) _____ High Water Table (A2) _____ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) _____ Water Marks (B1) <input checked="" type="checkbox"/> 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)	<p><u>Secondary Indicators (minimum of two required)</u></p> _____ 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)
<p>Field Observations:</p> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>1/2</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>Surface</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: <u>Heavy rain</u>	

VEGETATION – Use scientific names of plants.

Sampling Point: F-23

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: _____)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
	_____ = Total Cover			
Sapling Stratum (Plot size: _____)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
	_____ = Total Cover			
Shrub Stratum (Plot size: _____)				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
	_____ = Total Cover			
Herb Stratum (Plot size: _____)				
1.	20	Y	FACW	<i>Juncus effusus</i>
2.	15	Y	FACW	<i>Carex spp</i>
3.	3	N	FACU	<i>Tribolium repens (red clover)</i>
4.	5	N	FACU	<i>Grasses</i>
5.	3	N	FACW	<i>Phalaris arundinacea</i>
6.	2	N	FAC	<i>Mentha piperita</i>
7.				
8.				
9.				
10.				
11.				
12.				
	48 = Total Cover			
Woody Vine Stratum (Plot size: _____)				
1.				
2.				
3.				
4.				
5.				
	_____ = Total Cover			

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

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

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

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

48
2
96

SOIL

Sampling Point: F-23

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 6/1	96	7.5YR 6/6	4	C	PL	Sandy clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

- | | | |
|--|--|--|
| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils³: |
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> Red Parent Material (TF2) |
| <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) | | |

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

A hand-drawn soil profile diagram showing a soil column. At the top, there is a wavy line labeled 'water'. On the left side, there is a vertical line labeled 'zi vi'. On the right side, there is a vertical line labeled '18 in'. Inside the soil column, there are two horizontal lines with labels '10YR 6/1' and '7.5YR 6/6' written below it.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont (DRAFT)

Project/Site: Foundation 404 City/County: Green Co. Sampling Date: 4/19/11
 Applicant/Owner: Alpha State: PA Sampling Point: F28
 Investigator(s): B. Armstrong Section, Township, Range: Center Twp
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave
 Slope (%): _____ Lat: 39.867825 Long: 80.39929 Datum: NAD 27 PA South
 Soil Map Unit Name: Dormant-collector silt loams (D1F) NWI classification: PEM

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

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

Hydrophytic Vegetation Present?	Yes <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:			

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators</u> (minimum of one is required; check all that apply)</p> <input checked="" type="checkbox"/> Surface Water (A1) _____ True Aquatic Plants (B14) _____ High Water Table (A2) <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> 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)	<p><u>Secondary Indicators</u> (minimum of two required)</p> _____ Surface Soil Cracks (B6) _____ Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> 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)
<p>Field Observations:</p> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>1</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>surface</u> (includes capillary fringe)	<p>Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____</p>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <u>Heavy rain</u>	

VEGETATION – Use scientific names of plants.

Sampling Point: F-28

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

Sapling Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Juncus effusus</i>	20	Y	FACW
2. <i>Grasses</i>	15	Y	FACU
3. <i>Impatiens capensis</i>	10	N	FACW
4. <i>Carex spp.</i>	5	N	FACW
5. <i>Alliaria petiolata</i>	1	N	UPL
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			

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

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>35</u>	x 2 = <u>70</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>15</u>	x 4 = <u>60</u>
UPL species <u>1</u>	x 5 = <u>5</u>
Column Totals: <u>51</u> (A)	<u>135</u> (B)

Prevalence Index = B/A = 2.6

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

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

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

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

51 51
 25.5 10.2

51 135
 102
 330
 306
 24

SOIL

Sampling Point: F-28

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	Gley 5/10BG	98	10YR 6/4	2	C	PL	Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 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)	

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

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont (DRAFT)

Project/Site: Foundation 404 City/County: Greene Co. Sampling Date: 4/19/11
 Applicant/Owner: Alpha State: PA Sampling Point: F-41
 Investigator(s): B. Armstrong Section, Township, Range: Center Twp
 Landform (hillslope, terrace, etc.): Fluvialplain Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 39.86987 Long: 80.32562 Datum: NAD 27 PA South
 Soil Map Unit Name: Fluvaquents, loamy (Fa) NWI classification: PEM/PSS

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 _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) _____ True Aquatic Plants (B14) _____ High Water Table (A2) _____ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) _____ Water Marks (B1) _____ Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> 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) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> Aquatic Fauna (B13) (<u>Culicidae, Trichoptera, egg masses</u>)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>2"</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>Surface</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: <u>Heavy rain earlier</u>	

VEGETATION – Use scientific names of plants.

Sampling Point: F-41

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: _____)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
	_____ = Total Cover			
Sapling Stratum (Plot size: _____)				
1. <u>Salix nigra</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
	<u>10</u> = Total Cover			
Shrub Stratum (Plot size: _____)				
1. <u>Rosa multiflora</u>	<u>2</u>	<u>N</u>	<u>FACU</u>	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
	<u>2</u> = Total Cover			
Herb Stratum (Plot size: _____)				
1. <u>Leersia oryzoides</u>	<u>25</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Juncus effusus</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Typha latifolia</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
4. _____ <u>Spotted Ice-plant</u>	<u>3</u>	<u>N</u>	<u>FAC</u>	
5. <u>Impatiens capensis</u>	<u>3</u>	<u>N</u>	<u>FACW</u>	
6. <u>Eupatorium perfoliatum</u>	<u>3</u>	<u>N</u>	<u>FACW</u>	
7. <u>Solidago spp.</u>	<u>2</u>	<u>N</u>	<u>FACU</u>	
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
	<u>51</u> = Total Cover			
Woody Vine Stratum (Plot size: _____)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
	_____ = Total Cover			

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

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

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

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

$$\begin{array}{r} 51 \\ .2 \\ \hline 10.2 \end{array}$$

$$\begin{array}{r} 51 \\ .5 \\ \hline 25.5 \end{array}$$

SOIL

Sampling Point: F-41

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 4/2						loam	
2-16	10YR 5/2	90	7.5YR 6/8	10	C	PL	clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: Indicators for Problematic Hydric Soils³:

- | | | |
|--|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> Red Parent Material (TF2) |
| <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) | | |

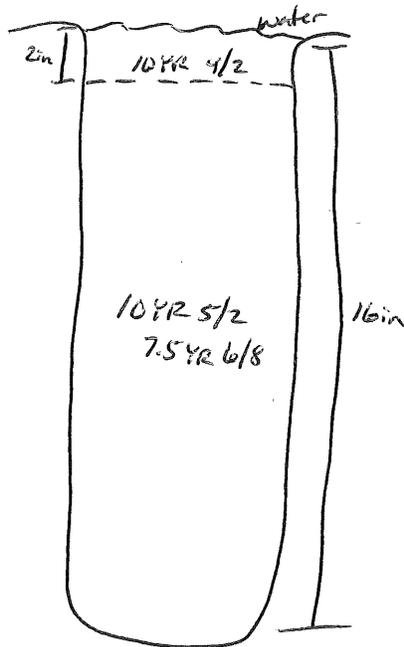
³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont (DRAFT)

Project/Site: Foundation 404 City/County: Greene Co Sampling Date: 4/19/11
 Applicant/Owner: Alpha State: PA Sampling Point: F-44
 Investigator(s): B. Armstrong Section, Township, Range: Center Twp
 Landform (hillslope, terrace, etc.): hillslope / floodplain Local relief (concave, convex, none): none
 Slope (%): _____ Lat: 39.869025 Long: 80.3246665 Datum: NAD 27 PA South
 Soil Map Unit Name: Newark silt loam (Nw) NWI classification: PEM

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

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

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

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) _____ True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) _____ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) _____ Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) _____ Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) _____ Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) _____ Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input 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 type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>1/2</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>Surface</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: <u>Heavy rain earlier</u>	

VEGETATION – Use scientific names of plants.

Sampling Point: F-44

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

Sapling Stratum (Plot size: _____)	_____ = Total Cover		
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

Shrub Stratum (Plot size: _____)	_____ = Total Cover		
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

Herb Stratum (Plot size: _____)	_____ = Total Cover		
1. <i>Juncus effusus</i>	20	Y	FACW
2. <i>Leersia oryzoides</i>	15	Y	OBL
3. <i>Eupatorium perfoliatum</i>	10	N	FACW
4. <i>Impatiens capensis</i>	5	N	FACW
5. <i>Phalaris arundinacea</i>	5	N	FACW
6. <i>Carex spp.</i>	5	N	FACW
7. <i>Ranunculus spp.</i>	2	N	FAC
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			

Woody Vine Stratum (Plot size: _____)	62 = Total Cover		
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

___ Prevalence Index is ≤3.0¹

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

___ Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No _____

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

31 62
 2
 —
 12.4

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont (DRAFT)

Project/Site: Foundation 404 City/County: Greene Co. Sampling Date: 4/26/11
 Applicant/Owner: Alpha State: PA Sampling Point: F-45
 Investigator(s): B. Armstrong Section, Township, Range: Center Twp
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave
 Slope (%): _____ Lat: 39.867842 Long: 80.322989 Datum: NAD 27 PA South
 Soil Map Unit Name: Dormant-culleaks silt loam NWI classification: PEM/PSS

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 _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area F-45 within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

HYDROLOGY

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

Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>1/2</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>surface</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:

VEGETATION – Use scientific names of plants.

Sampling Point: F-45

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				
Sapling Stratum (Plot size: _____)				
1. <u>Salix nigra</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Acer negundo</u>	<u>3</u>	<u>N</u>	<u>FACU</u>	
3. <u>Juglans nigra</u>	<u>3</u>	<u>N</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>16</u> = Total Cover				
Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: _____)				
1. <u>Leersia oryzoides</u>	<u>25</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Agrimonia parviflora</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Hydrocotyle americana</u>	<u>10</u>	<u>N</u>	<u>OBL</u>	
4. <u>Juncus effusus</u>	<u>8</u>	<u>N</u>	<u>FACW</u>	
5. <u>Impatiens capensis</u>	<u>3</u>	<u>N</u>	<u>FACW</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>61</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

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

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

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

61
12.2

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont (DRAFT)

Project/Site: Foundation 404 City/County: Greene Co. Sampling Date: 4/20/11
 Applicant/Owner: Alpha State: PA Sampling Point: F-52
 Investigator(s): B. Armstrong Section, Township, Range: Center Twp
 Landform (hillslope, terrace, etc.): lowland / floodplain Local relief (concave, convex, none): Concave
 Slope (%): _____ Lat: 39.866561 Long: 80.318007 Datum: NAD 27 PA South
 Soil Map Unit Name: Dement- Colleca silt loam NWI classification: PEM

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

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

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

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) _____ True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) _____ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Sediment Deposits (B2) _____ Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) _____ Thin Muck Surface (C7) <input checked="" type="checkbox"/> Algal Mat or Crust (B4) _____ 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 checked="" type="checkbox"/> Aquatic Fauna (B13) <u>Tadpoles, mussels, snapping turtle (2)</u>	<u>Secondary Indicators (minimum of two required)</u> <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 type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>4</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>surface</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:	

VEGETATION – Use scientific names of plants.

Sampling Point: F-52

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

Sapling Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Typha latifolia</i>	25	Y	OBL
2. <i>Leersia oryzoides</i>	10	Y	OBL
3. <i>Carex spp.</i>	5	N	FACW
4. <i>Nasturtium spp.</i>	3	N	OBL
5. <i>Ludwigia palustris</i>	2	N	OBL
6. <i>Ranunculus spp.</i>	2	N	FAC
7. <i>Trifolium repens</i>	2	N	FACU
8. <i>Juncus effusus</i>	1	N	FACW
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

___ Prevalence Index is ≤3.0¹

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

___ Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No _____

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

SOIL

Sampling Point: F-52

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 5/1	95	10YR 4/6	5	C	PL	Silty clay loam	
5-14	10YR 4/1	85	7.5YR 6/6	15	C	M	clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils³:

- 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)

- 2 cm Muck (A10) (MLRA 147)
- Piedmont Floodplain Soils (F19) (MLRA 136, 147)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

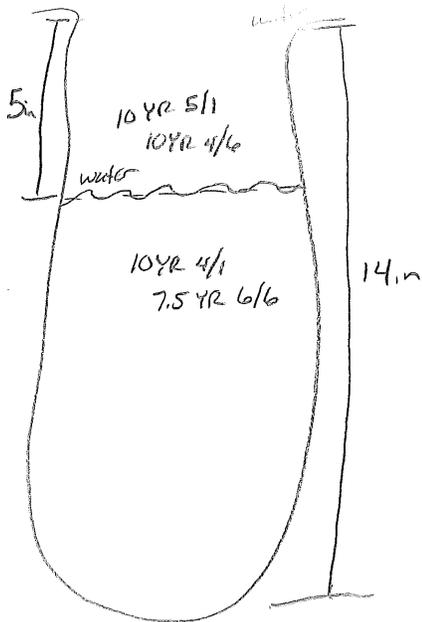
³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No _____

Remarks:



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont (DRAFT)

Project/Site: Foundation 404 City/County: Greene Co. Sampling Date: 4/20/11
 Applicant/Owner: Alpha State: PA Sampling Point: F-62
 Investigator(s): B. Armstrong Section, Township, Range: Center Twp.
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Concave
 Slope (%): _____ Lat: 39.867663 Long: 80.314215 Datum: NAD 27 PA South
 Soil Map Unit Name: Dormant-collecks silt loam (D+F) NWI classification: PEM

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ F-62
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Moss Trim Lines (B16)
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Crayfish Burrows (C8)
<input checked="" type="checkbox"/> Algal Mat or Crust (B4)	<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 type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>2</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>Surface</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: F-62

<u>Tree Stratum</u> (Plot size: _____)	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	Dominance Test worksheet:
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. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				
Sapling Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				
Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: _____)				
1. <u>Carex spp.</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Leersia oryzoides</u>	<u>10</u>	<u>Y</u>	<u>OBL</u>	
3. <u>Ludwigia alternifolia</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
4. <u>Agriomania peruviflora</u>	<u>3</u>	<u>N</u>	<u>FAC</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>48</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Definitions of Vegetation Strata: Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine – All woody vines, regardless of height.				
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

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

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Foundation Mine City/County: Greene Sampling Date: 5/31/2011
 Applicant/Owner: Alpha State: PA Sampling Point: F-70
 Investigator(s): MW, CW, BA, Kevin Gabig, Mike Badner Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR or MLRA): _____ Lat: 39.864114 Long: -80.312088 Datum: _____
 Soil Map Unit Name: DoD NWI classification: 100% PEMP
 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 _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <input checked="" type="checkbox"/> Surface Water (A1) _____ True Aquatic Plants (B14) _____ High Water Table (A2) _____ Hydrogen Sulfide Odor (C1) _____ Saturation (A3) <input checked="" type="checkbox"/> 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)	<p><u>Secondary Indicators (minimum of two required)</u></p> _____ Surface Soil Cracks (B6) _____ Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> 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)
<p>Field Observations:</p> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No _____ Depth (inches): _____	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: F-70

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: _____)				
1.	_____	_____	_____	
2.	_____	_____	_____	
3.	_____	_____	_____	
4.	_____	_____	_____	
5.	_____	_____	_____	
6.	_____	_____	_____	
7.	_____	_____	_____	
8.	_____	_____	_____	
	_____ = Total Cover			
Sapling/Shrub Stratum (Plot size: _____)				
1.	_____	_____	_____	
2.	_____	_____	_____	
3.	_____	_____	_____	
4.	_____	_____	_____	
5.	_____	_____	_____	
6.	_____	_____	_____	
7.	_____	_____	_____	
8.	_____	_____	_____	
9.	_____	_____	_____	
10.	_____	_____	_____	
	_____ = Total Cover			
Herb Stratum (Plot size: _____)				
1.	_____	_____	_____	<i>Onoclea sensibilis</i>
2.	_____	_____	_____	<i>Eupatorium perfoliatum</i>
3.	_____	_____	_____	<i>Carex spp.</i>
4.	_____	_____	_____	
5.	_____	_____	_____	
6.	_____	_____	_____	
7.	_____	_____	_____	
8.	_____	_____	_____	
9.	_____	_____	_____	
10.	_____	_____	_____	
11.	_____	_____	_____	
12.	_____	_____	_____	
	_____ = Total Cover			
Woody Vine Stratum (Plot size: _____)				
1.	_____	_____	_____	
2.	_____	_____	_____	
3.	_____	_____	_____	
4.	_____	_____	_____	
5.	_____	_____	_____	
6.	_____	_____	_____	
	_____ = Total Cover			
<p>Remarks: (Include photo numbers here or on a separate sheet.)</p>				

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

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

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes No

SOIL

Sampling Point: F-70

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 2/2	100					lo.m	
4-12	10YR 3/3	98	10YR 5/8	2	C	M	clay loam	

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

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) (LRR N)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) (MLRA 147, 148)
- Thin Dark Surface (S9) (MLRA 147, 148)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) (LRR N, MLRA 136)
- Umbric Surface (F13) (MLRA 136, 122)
- Piedmont Floodplain Soils (F19) (MLRA 148)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (MLRA 147)
- Coast Prairie Redox (A16) (MLRA 147, 148)
- Piedmont Floodplain Soils (F19) (MLRA 136, 147)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

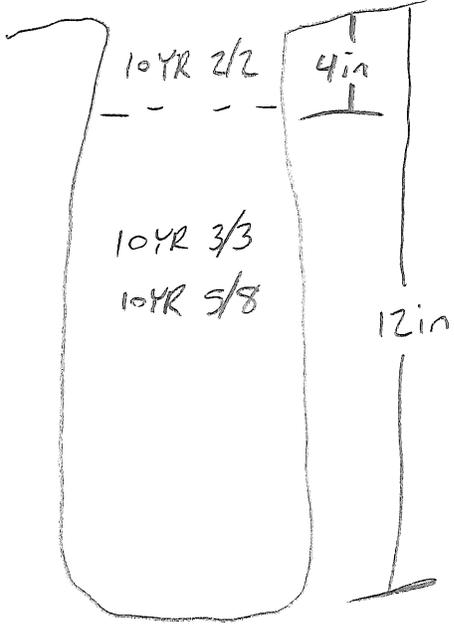
³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Foundation 404 City/County: Holbrook/Greene Sampling Date: 6-30-11
 Applicant/Owner: FOUNDATION MINING, LP (ALPHA) State: PA Sampling Point: HOG 3
 Investigator(s): MAP, MJD Section, Township, Range: Center township
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion (LRR or MLRA): _____ Lat: 80° 20' 12.6" W Long: 39° 52' 21.5" N Datum: NAD 27
 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 _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: <u>Landowner informed us that the wetland was the old stream channel before he channalized the stream and filled in the old channel.</u>	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> Aquatic Fauna (B13)	<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 type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: 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): _____	See above indicators Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
--	---

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

Remarks: Wetland is inundated during heavy rain events only. During dry periods, hydrology is lacking. This is the old stream channel. It was diverted 20+ years ago by landowner who created a new channel for agricultural purposes (channalized + straightened).

checked by CSW

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

Sampling Point: HOG 3

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

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

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Sweet flag <i>Acorus spp.</i>	30	Y	
2. Bone Set <i>Eupatorium prostratum</i>	1	N	
3. Iron weed <i>Veronica gigantea</i>	10	N	
4. Mint (spearmint) <i>Mentha spicata</i>	5	N	
5. Marsh pepper smartweed <i>Persicaria hydropiper</i>	15	Y	
6. Rag weed <i>Ambrosia artemisiifolia</i>	1	N	
7. Curly Dock <i>Rumex spp.</i>	5	N	
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No _____

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

Located in pasture. Landowner let us know the wetland was old stream channel before he cut a new channel

50/20
50% = 33.5
20% = 13.4

1 30
2 15
3 10

checked by CJW ✓

SOIL

Sampling Point: H0G3

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5 in	10 _{yr} 4/3	100					S.L.	
5-18 in	2.5 _y 5/2	90	5 _{yr} 3/4	10			C.L.	

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

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) (LRR N)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) (MLRA 147, 148)
- Thin Dark Surface (S9) (MLRA 147, 148)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) (LRR N, MLRA 136)
- Umbric Surface (F13) (MLRA 136, 122)
- Piedmont Floodplain Soils (F19) (MLRA 148)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (MLRA 147)
- Coast Prairie Redox (A16) (MLRA 147, 148)
- Piedmont Floodplain Soils (F19) (MLRA 136, 147)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

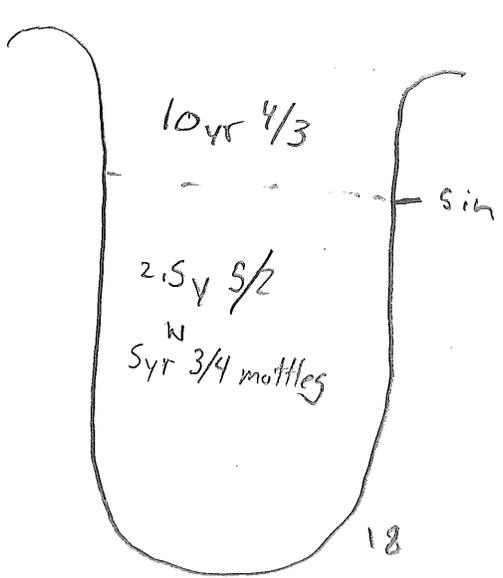
³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: None
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks: Soil is borderline, the lower layer is dry + crumbles when removed from soil pit. Weak characteristics.



No H₂O in pit

Checked by CJW



Routine Wetland Determination

DATA FORM

Based upon 1987 Corps Wetland Delineation Manual

Project/Site: Hoge Run	Date: November 6, 2006
Applicant/owner: Foundation Coal, LP	County: Greene
Investigator(s): JJN	State: PA
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: HOG-1 Habitat: PEM Plot ID:
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Explanation of atypical or problem area:	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species (Common Name)	Dominant Plant Species (Scientific Name)	Strata	Indicator Status
Soft rush	<i>Juncus effusus</i>	H	FACW+
Green Bulrush	<i>Scirpus atrovirens</i>	H	OBL
Reed Canary Grass	<i>Phalaris arundinacea</i>	H	FACW+
Wingstem	<i>Verbesina alterifolia</i>	H	FAC
Straw- colored Nutsedge	<i>Cyperus strigosus</i>	H	FACW

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100%

Check all indicators that apply and explain below:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation | <input type="checkbox"/> Physiological/reproductive adaptations |
| <input type="checkbox"/> Morphological adaptations | <input checked="" type="checkbox"/> Wetland plant database |
| <input type="checkbox"/> Technical Literature | <input checked="" type="checkbox"/> Personal knowledge of regional plant communities |
| | <input type="checkbox"/> Other (explain) |

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks: Greater than 50% of dominant vegetation is OBL, FACW, or FAC.

HYDROLOGY

Is it the growing season? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Marks: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>on stems, ground</i>	Sediment Deposits: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)	Drift Lines: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Drainage Patterns: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth of inundation: 8 inches	Oxidized Root (live roots) Channels <12in.: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Local Soil Survey: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth to free water in pit: inches	FAC Neutral: <input type="checkbox"/> Yes <input type="checkbox"/> No	Water-stained Leaves: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Depth to saturated soil: surface	Other (explain): AutoCAD topographic mapping	
Check all that apply & explain below: <input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input checked="" type="checkbox"/> Other		

Wetland hydrology present? Yes No

Rationale for decision/remarks: Observed evidence of hydrology.

Routine Wetland Determination

DATA FORM

Based upon 1987 Corps Wetland Delineation Manual

SOILS	
Map Unit Name (Series and Phase) : Newark	Drainage Class
Taxonomy (subgroup): Nw	Field observations confirm mapped type? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Hydric Soil Indicators: (check all that apply)	
<input type="checkbox"/> Histosol	<input type="checkbox"/> Matrix chroma ≤ 2 with mottles
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> Mg or Fe Concretions
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils
<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Organic Streaking in Sandy Soils
<input checked="" type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Listed on National/Local Hydric Soils List
<input checked="" type="checkbox"/> Gleyed or Low-Chroma (=1) matrix	<input type="checkbox"/> Other (explain in remarks)
Soil Matrix: 10 yr 4/1	Soil Mottle:
Hydric soils present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Rationale for decision/Remarks: Hydric soil chromatic criteria met.	
Wetland Determination	
Hydrophytic vegetation present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Hydric soils present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland hydrology present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is the sampling point within a wetland?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Rationale/Remarks: All three wetland criteria met.	

Photo:





Routine Wetland Determination

DATA FORM

Based upon 1987 Corps Wetland Delineation Manual

Project/Site: Hoge Run	Date: November 6, 2006
Applicant/owner: Foundation Coal, LP	County: Greene
Investigator(s): JJN	State: PA
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: HOG-2 Habitat: PEM Plot ID:
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Explanation of atypical or problem area:	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species (Common Name)	Dominant Plant Species (Scientific Name)	Strata	Indicator Status
Soft rush	<i>Juncus effusus</i>	H	FACW+
Green Bulrush	<i>Scirpus atrovirens</i>	H	OBL
Reed Canary Grass	<i>Phalaris arundinaceae</i>	H	FACW+
Wool-Grass	<i>Scirpus cyperinus</i>	H	FACW+
Straw- colored Nutsedge	<i>Cyperus strigosus</i>	H	FACW
Sedge spp.	<i>Carex spp.</i>	H	

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100%

Check all indicators that apply and explain below:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation | <input type="checkbox"/> Physiological/reproductive adaptations |
| <input type="checkbox"/> Morphological adaptations | <input checked="" type="checkbox"/> Wetland plant database |
| <input type="checkbox"/> Technical Literature | <input type="checkbox"/> Personal knowledge of regional plant communities |
| | <input type="checkbox"/> Other (explain) |

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks: Greater than 50% of dominant vegetation is OBL, FACW, or FAC.

HYDROLOGY

Is it the growing season? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Marks: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>on stems, ground</i>	Sediment Deposits: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)	Drift Lines: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Drainage Patterns: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth of inundation: 12 inches	Oxidized Root (live roots) Channels <12in.: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Local Soil Survey: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth to free water in pit: inches	FAC Neutral: <input type="checkbox"/> Yes <input type="checkbox"/> No	Water-stained Leaves: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Depth to saturated soil: surface	Other (explain): AutoCAD topographic mapping	
Check all that apply & explain below: <input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input checked="" type="checkbox"/> Other		

Wetland hydrology present? Yes No

Rationale for decision/remarks: Observed evidence of hydrology.

Routine Wetland Determination

DATA FORM

Based upon 1987 Corps Wetland Delineation Manual

SOILS

Map Unit Name (Series and Phase) : Newark

Drainage Class

Taxonomy (subgroup): Nw

Field observations confirm mapped type? Yes No

Hydric Soil Indicators: (check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Histosol | <input type="checkbox"/> Matrix chroma \leq 2 with mottles |
| <input type="checkbox"/> Histic Epipedon | <input checked="" type="checkbox"/> Mg or Fe Concretions |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils |
| <input type="checkbox"/> Aquic Moisture Regime | <input type="checkbox"/> Organic Streaking in Sandy Soils |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National/Local Hydric Soils List |
| <input checked="" type="checkbox"/> Gleyed or Low-Chroma (=1) matrix | <input type="checkbox"/> Other (explain in remarks) |

Soil Matrix: 10 yr 4/1

Soil Mottle:

Hydric soils present? Yes No

Rationale for decision/Remarks: Hydric soil chromatic criteria met with the presence of mottles.

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks: All three wetland criteria met.

Photo:



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont (DRAFT)

Project/Site: R3 City/County: Greene Co. Sampling Date: 4/29/11
 Applicant/Owner: Alpha State: PA Sampling Point: R3-1
 Investigator(s): B. Armstrong Section, Township, Range: Center Twp.
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): none
 Slope (%): _____ Lat: 39.874441 Long: 80.334501 Datum: NAD 27 PA South
 Soil Map Unit Name: Flovaquents, loamy (Fa) NWI classification: PEM

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

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

Hydrophytic Vegetation Present?	Yes <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:		

HYDROLOGY

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

Field Observations: 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>Surface</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
---	--

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

Remarks:
 #11 - wetland
 #12 - upland

VEGETATION – Use scientific names of plants.

Sampling Point: R3-2

	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	
Tree Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
				_____ = Total Cover
Sapling Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
				_____ = Total Cover
Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
				_____ = Total Cover
Herb Stratum (Plot size: _____)				
1. <u>Carex spp</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Lecythis acryroides</u>	<u>10</u>	<u>Y</u>	<u>OBL</u>	
3. <u>Juncus effusus</u>	<u>2</u>	<u>N</u>	<u>FACW</u>	
4. <u>Typha latifolia</u>	<u>2</u>	<u>N</u>	<u>OBL</u>	
5. <u>Rumex obtusifolius</u>	<u>2</u>	<u>N</u>	<u>FACU</u>	
6. <u>Impatiens capensis</u>	<u>1</u>	<u>N</u>	<u>FACW</u>	
7. <u>Viola spp</u>	<u>1</u>	<u>N</u>	<u>FAC</u>	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
				<u>48</u> = Total Cover
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
				_____ = Total Cover

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

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

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

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

48
92
96

SOIL

Sampling Point: R3-1

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 ¹	Loc ²		
0-6	10YR 6/1	96	7.5YR 6/6	10	C	PL	s.H loam	
6-18	10YR 2/1	100					s.H loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

- | | | |
|--|---|--|
| <p>Hydric Soil Indicators:</p> <ul style="list-style-type: none"> <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) | <ul style="list-style-type: none"> <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) | <p>Indicators for Problematic Hydric Soils³:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks) |
|--|---|--|

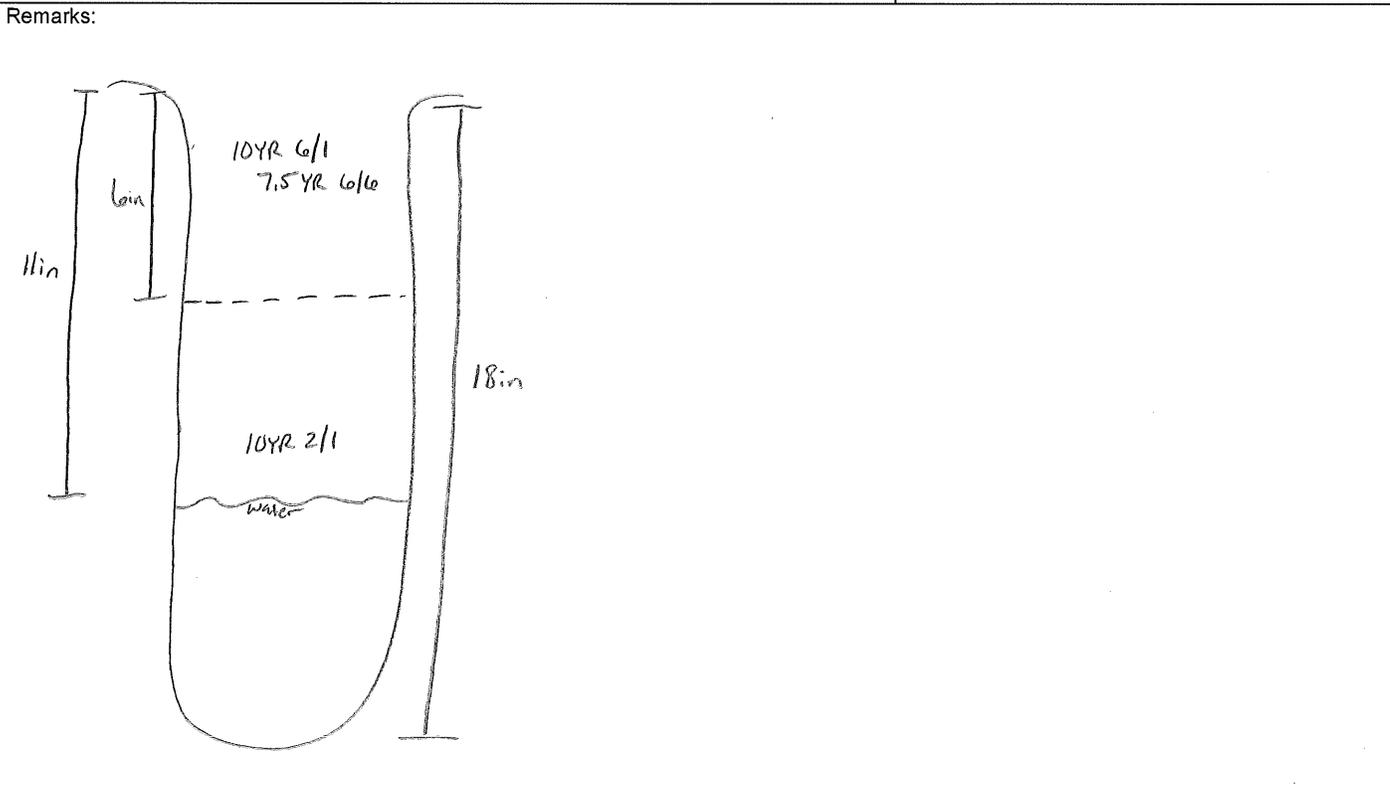
³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont (DRAFT)

Project/Site: R3 City/County: Greene Co. Sampling Date: 4/29/11
 Applicant/Owner: Alpha State: PA Sampling Point: R3-2
 Investigator(s): B. Armstrong Section, Township, Range: Center Twp.
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): none
 Slope (%): _____ Lat: 39.873704 Long: 80.334204 Datum: NAD 27 PA South
 Soil Map Unit Name: Fluvaquents, loamy (FA) NWI classification: PEM

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

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

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

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (minimum of one is required; check all that apply)</p> ___ Surface Water (A1) ___ True Aquatic Plants (B14) ___ High Water Table (A2) ___ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> 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)	<p><u>Secondary Indicators (minimum of two required)</u></p> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) <input checked="" type="checkbox"/> 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)
<p>Field Observations:</p> 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>Surface</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: #13 - wetland #14 - upland	

VEGETATION – Use scientific names of plants.

Sampling Point: R3-2

<u>Tree Stratum</u> (Plot size: _____)	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				
<u>Sapling Stratum</u> (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				
<u>Shrub Stratum</u> (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				
<u>Herb Stratum</u> (Plot size: _____)				
1. <u>Leersia oryzoides</u>	<u>25</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Juncus effusus</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Carex spp</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	
4. <u>Impatiens capensis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
5. <u>Eupatorium perfoliatum</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
6. <u>Rumex obtusifolius</u>	<u>2</u>	<u>N</u>	<u>FACU</u>	
7. <u>Tribolium repens</u>	<u>2</u>	<u>N</u>	<u>FACU</u>	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>59</u> = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Definitions of Vegetation Strata:				
Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).				
Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.				
Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.				
Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.				
Woody vine – All woody vines, regardless of height.				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____				

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

459. 59
 5 2
 29.5 11.8

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 4/2	100					silt loam	
3-10	10YR 5/2	85	7.5YR 6/8	15	C	M	silt loam	
10-16	2.5Y 6/1	95	10YR 7/8	5	C	M	clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: Indicators for Problematic Hydric Soils³:

- | | | |
|--|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> (MLRA 136, 147) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Stratified Layers (A5) | <input checked="" type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> 2 cm Muck (A10) (LRR N) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Other (Explain in Remarks) |
| <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) | | |

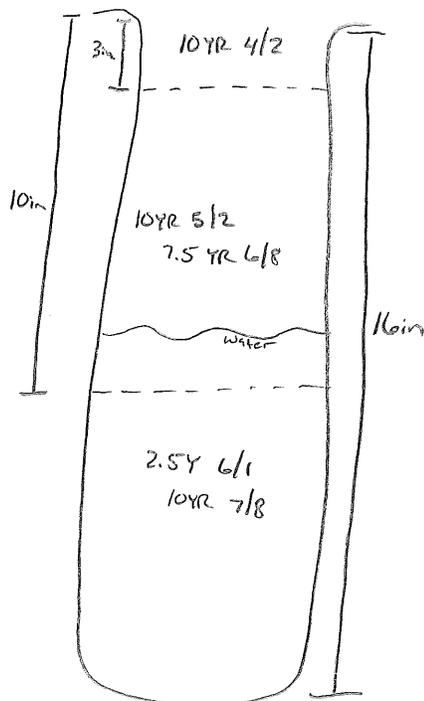
³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No _____

Remarks:



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont (DRAFT)

Project/Site: R3 City/County: Greene Co. Sampling Date: 4/29/11
 Applicant/Owner: Alpha State: PA Sampling Point: R3-3
 Investigator(s): B. Armstrong Section, Township, Range: Center Twp
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): none
 Slope (%): _____ Lat: 39.873379 Long: 80.334038 Datum: NAD 27 PA South
 Soil Map Unit Name: Fluvisols, leamy NWI classification: PER1

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 _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ True Aquatic Plants (B14) _____ High Water Table (A2) _____ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) _____ Water Marks (B1) _____ Presence of Reduced Iron (C4) _____ Sediment Deposits (B2) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Drift Deposits (B3) _____ Thin Muck Surface (C7) _____ Algal Mat or Crust (B4) _____ Other (Explain in Remarks) _____ Iron Deposits (B5) _____ Inundation Visible on Aerial Imagery (B7) _____ Water-Stained Leaves (B9) _____ Aquatic Fauna (B13)	Secondary Indicators (minimum of two required) _____ Surface Soil Cracks (B6) _____ Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <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>Surface</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: #15 - Wetland #16 - Upland	

VEGETATION – Use scientific names of plants.

Sampling Point: P3-3

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
_____ = Total Cover			
<u>Sapling Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
_____ = Total Cover			
<u>Shrub Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
_____ = Total Cover			
<u>Herb Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Leersia oryzoides</i> (grazed)	46	Y	OBL
2. <i>Juncus effusus</i>	10	N	FACW
3. <i>Mantha piperita</i>	2	N	FACW
4. <i>Carex</i> spp. (grazed)	2	N	FACW
5. <i>Dipsacus sylvestris</i>	1	N	NI
6. <i>Rumex obtusifolius</i>	1	N	FACU
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
_____ = Total Cover			
<u>Woody Vine Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
_____ = Total Cover			

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 _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B)
Prevalence Index = B/A = _____	

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

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

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

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

56
+ 2

11.2

SOIL

Sampling Point: R3-3

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 5/3	100					silt loam	
2-12	10YR 6/2	90	7.5YR 6/8	10	C	PL	silt loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

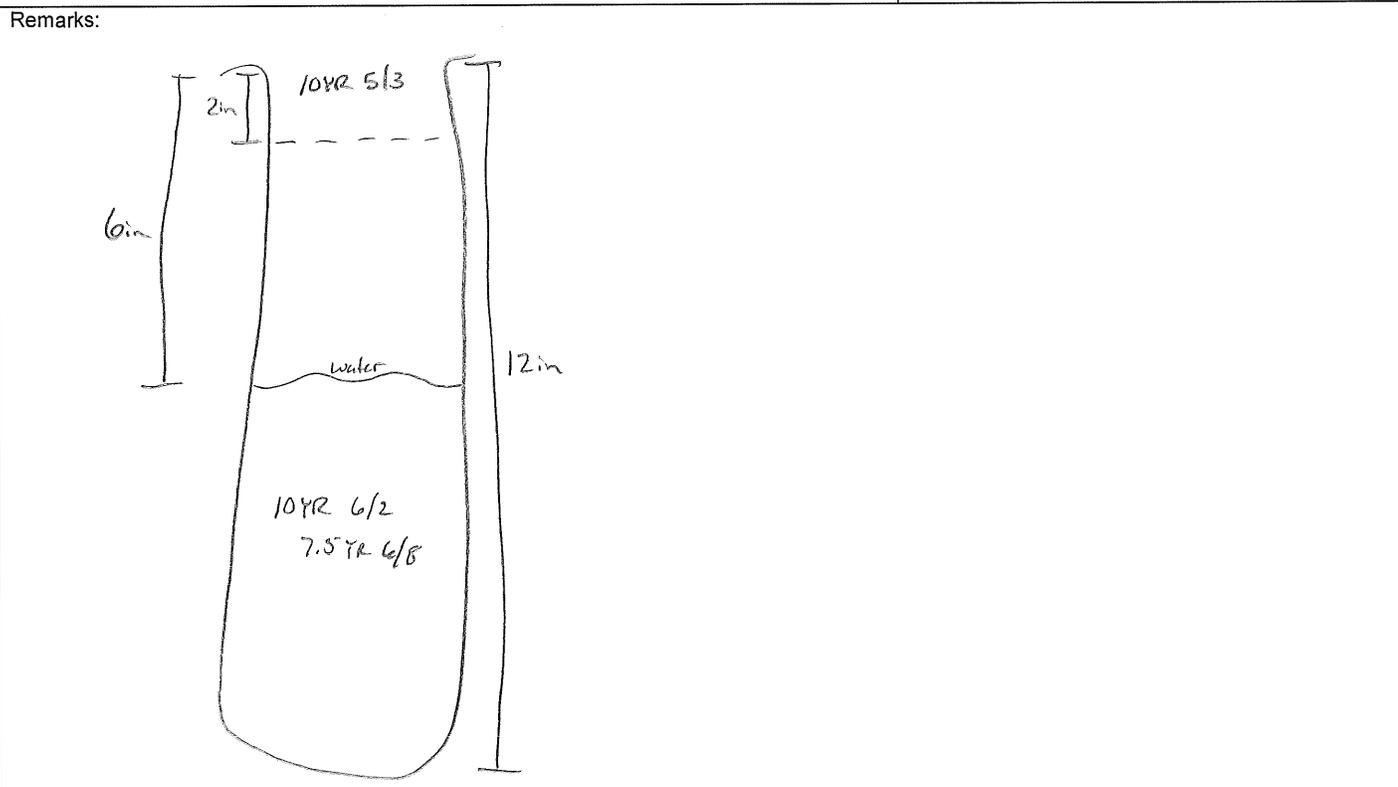
- Hydric Soil Indicators:**
- Histosol (A1)
 - Histic Epipedon (A2)
 - Black Histic (A3)
 - Hydrogen Sulfide (A4)
 - Stratified Layers (A5)
 - 2 cm Muck (A10) (LRR N)
 - Depleted Below Dark Surface (A11)
 - Thick Dark Surface (A12)
 - Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)
 - Sandy Gleyed Matrix (S4)
 - Sandy Redox (S5)
 - Stripped Matrix (S6)
 - Dark Surface (S7)
 - Polyvalue Below Surface (S8) (MLRA 147, 148)
 - Thin Dark Surface (S9) (MLRA 147, 148)
 - Loamy Gleyed Matrix (F2)
 - Depleted Matrix (F3)
 - Redox Dark Surface (F6)
 - Depleted Dark Surface (F7)
 - Redox Depressions (F8)
 - Iron-Manganese Masses (F12) (LRR N, MLRA 136)
 - Umbric Surface (F13) (MLRA 136, 122)
 - Piedmont Floodplain Soils (F19) (MLRA 148)
- Indicators for Problematic Hydric Soils³:**
- 2 cm Muck (A10) (MLRA 147)
 - Piedmont Floodplain Soils (F19) (MLRA 136, 147)
 - Red Parent Material (TF2)
 - Very Shallow Dark Surface (TF12)
 - Other (Explain in Remarks)
- ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: _____ City/County: _____ Sampling Date: _____
 Applicant/Owner: _____ State: _____ Sampling Point: _____
 Investigator(s): _____ Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR or MLRA): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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

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

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

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ 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)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

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

Sampling Point: _____

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: _____)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: _____)				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is $\leq 3.0^1$ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				
Hydrophytic Vegetation Present? Yes _____ No _____				
Remarks: (Include photo numbers here or on a separate sheet.)				

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: R3 City/County: Greene County Sampling Date: 5.11.11
 Applicant/Owner: Alpha Natural Resources State: PA Sampling Point: R3-5
 Investigator(s): B. Armstrong Section, Township, Range: Center Twp.
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): _____
 Subregion (LRR or MLRA): _____ Lat: 39.872851 Long: 80.338937 Datum: _____
 Soil Map Unit Name: D4F 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 _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators: <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) _____ 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) <input checked="" type="checkbox"/> 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) <input checked="" type="checkbox"/> Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) <input checked="" type="checkbox"/> Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)	
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0.25</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ 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: _____

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

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)

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Sweetflag</u>	<u>40</u>		
2. <u>Banaset</u>	<u>3</u>		
3. <u>Impatiens capensis</u>	<u>30</u>		
4. <u>Carex spp</u>	<u>3</u>		
5. <u>Juncus spp</u>	<u>6</u>		
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

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

Problematic Hydrophytic Vegetation¹ (Explain)

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

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

Definitions of Four Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? Yes X No _____

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

SOIL

Sampling Point: _____

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 5/1		10YR 5/6	5	C	PL	Silty Loam	
4-10	5YR 4/1						Clay Loam	
10-18	5YR 3/1						Clay Loam	

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

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) (LRR N)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) (MLRA 147, 148)
- Thin Dark Surface (S9) (MLRA 147, 148)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) (LRR N, MLRA 136)
- Umbric Surface (F13) (MLRA 136, 122)
- Piedmont Floodplain Soils (F19) (MLRA 148)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (MLRA 147)
- Coast Prairie Redox (A16) (MLRA 147, 148)
- Piedmont Floodplain Soils (F19) (MLRA 136, 147)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:



Routine Wetland Determination

DATA FORM

Based upon 1987 Corps Wetland Delineation Manual

Project/Site: Foundation shaft and slope	Date: 6/27/08
Applicant/owner: Foundation Coal	County: Greene
Investigator(s): JN	State: PA
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: PEM Transect ID: Wetland A Plot ID:
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Explanation of atypical or problem area:	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species (Common Name)	Dominant Plant Species (Scientific Name)	Strata	Indicator Status
Hop sedge	<i>Carex lupulina</i>	H	OBL
Fox sedge	<i>Carex vulpinoidea</i>	H	OBL
Common boneset	<i>Eupatorium perfoliatum</i>	H	FACW+
Soft rush	<i>Juncus effusus</i>	H	FACW+
Reed canary	<i>Phalaris arundinacea</i>	H	FACW+
Green bulrush	<i>Scirpus atrovirens</i>	H	OBL

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100%

Check all indicators that apply and explain below:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation | <input type="checkbox"/> Physiological/reproductive adaptations |
| <input type="checkbox"/> Morphological adaptations | <input type="checkbox"/> Wetland plant database |
| <input type="checkbox"/> Technical Literature | <input checked="" type="checkbox"/> Personal knowledge of regional plant communities |
| | <input type="checkbox"/> Other (explain) |

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks: Greater than 50% of dominant vegetation is OBL, FACW, or FAC.

HYDROLOGY

Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Water Marks: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>on stems, ground</i>	Sediment Deposits: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)	Drift Lines: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Drainage Patterns: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Depth of inundation: _____ inches	Oxidized Root (live roots) Channels <12in.: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Local Soil Survey: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth to free water in pit: _____ inches	FAC Neutral: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water-stained Leaves: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Depth to saturated soil: _____	Other (explain): AutoCAD topographic mapping	
Check all that apply & explain below: <input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input checked="" type="checkbox"/> Other		

Wetland hydrology present? Yes No

Rationale for decision/remarks: Observed evidence of hydrology.

Routine Wetland Determination

DATA FORM

Based upon 1987 Corps Wetland Delineation Manual

SOILS

Map Unit Name (Series and Phase) : Dormont-Culleoka silt loam Drainage Class
 Field observations confirm mapped type? Yes No

Taxonomy (subgroup) DtF

Hydric Soil Indicators: (check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Histosol | <input type="checkbox"/> Matrix chroma \leq 2 with mottles |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> Mg or Fe Concretions |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils |
| <input type="checkbox"/> Aquic Moisture Regime | <input type="checkbox"/> Organic Streaking in Sandy Soils |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National/Local Hydric Soils List |
| <input checked="" type="checkbox"/> Gleyed or Low-Chroma (=1) matrix | <input type="checkbox"/> Other (explain in remarks) |

Soil Matrix: 4/5 GY

Soil Mottle:

Hydric soils present? Yes No

Rationale for decision/Remarks: Gleyed soils present.

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks: All three wetland criteria met.

Photo:





Routine Wetland Determination

DATA FORM

Based upon 1987 Corps Wetland Delineation Manual

Project/Site: Foundation Shaft and Slope	Date: 6/28/08
Applicant/owner: Foundation Coal	County: Greene
Investigator(s): JN	State: PA
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: PEM Transect ID: Wetland B Plot ID:
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Explanation of atypical or problem area:	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species (Common Name)	Dominant Plant Species (Scientific Name)	Strata	Indicator Status
Hop sedge	<i>Carex lupulina</i>	H	OBL
Jewelweed	<i>Impatiens capensis</i>	H	FACW
Cinnamon fern	<i>Osmunda cinnamomea</i>	H	FACW
Rice cutgrass	<i>Leersia oryzoides</i>	H	OBL

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100%

Check all indicators that apply and explain below:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation | <input type="checkbox"/> Physiological/reproductive adaptations |
| <input type="checkbox"/> Morphological adaptations | <input checked="" type="checkbox"/> Wetland plant database |
| <input type="checkbox"/> Technical Literature | <input checked="" type="checkbox"/> Personal knowledge of regional plant communities |
| | <input type="checkbox"/> Other (explain) |

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks: Greater than 50% of dominant vegetation is OBL, FACW, or FAC.

HYDROLOGY

Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Water Marks: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>on stems, ground</i>	Sediment Deposits: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)	Drift Lines: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Drainage Patterns: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth of inundation: _____ inches	Oxidized Root (live roots) Channels <12in.: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Local Soil Survey: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Depth to free water in pit: _____ inches	FAC Neutral: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water-stained Leaves: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Depth to saturated soil: _____	Other (explain): AutoCAD topographic mapping	
Check all that apply & explain below: <input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input checked="" type="checkbox"/> Other		

Wetland hydrology present? Yes No

Rationale for decision/remarks: Observed evidence of hydrology.

Routine Wetland Determination

DATA FORM

Based upon 1987 Corps Wetland Delineation Manual

SOILS

Map Unit Name (Series and Phase) : Dormont-Culleoka silt loam

Drainage Class

Field observations confirm mapped type? Yes No

Taxonomy (subgroup) DtF

Hydric Soil Indicators: (check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Histosol | <input type="checkbox"/> Matrix chroma ≤ 2 with mottles |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> Mg or Fe Concretions |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils |
| <input type="checkbox"/> Aquic Moisture Regime | <input type="checkbox"/> Organic Streaking in Sandy Soils |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National/Local Hydric Soils List |
| <input checked="" type="checkbox"/> Gleyed or Low-Chroma (=1) matrix | <input type="checkbox"/> Other (explain in remarks) |

Soil Matrix: 4/5 GY

Soil Mottle:

Hydric soils present? Yes No

Rationale for decision/Remarks: Hydric soil chromatic criteria met with the presence of mottles.

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks: All three wetland criteria met.

Photo:





Routine Wetland Determination

DATA FORM

Based upon 1987 Corps Wetland Delineation Manual

Project/Site: Foundation Shaft and Slope	Date: 6/27/08
Applicant/owner: Foundation Coal	County: Greene
Investigator(s): JN	State: PA
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: PEM/PSS Transect ID: Wetland C Plot ID:
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Explanation of atypical or problem area:	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species (Common Name)	Dominant Plant Species (Scientific Name)	Strata	Indicator Status
Green Bulrush	<i>Scirpus atrovirens</i>	H	OBL
Hop Sedge	<i>Carex lupulina</i>	H	OBL
Common Boneset	<i>Eupatorium perfoliatum</i>	H	FACW+
Broom Top Sedge	<i>Carex scoparia</i>	H	FACW+
Reed Canarygrass	<i>Phalaris arundinacea</i>	H	FACW+
Common Rush	<i>Juncus effusus</i>	H	FACW+

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100%

Check all indicators that apply and explain below:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation | <input type="checkbox"/> Physiological/reproductive adaptations |
| <input type="checkbox"/> Morphological adaptations | <input checked="" type="checkbox"/> Wetland plant database |
| <input type="checkbox"/> Technical Literature | <input checked="" type="checkbox"/> Personal knowledge of regional plant communities |
| | <input type="checkbox"/> Other (explain) |

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks: Greater than 50% of dominant vegetation is OBL, FACW, or FAC.

HYDROLOGY

Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Water Marks: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>on stems, ground</i>	Sediment Deposits: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)	Drift Lines: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Drainage Patterns: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth of inundation: _____ inches	Oxidized Root (live roots) Channels <12in.: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Local Soil Survey: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth to free water in pit: _____ inches	FAC Neutral: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water-stained Leaves: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Depth to saturated soil: _____	Other (explain): AutoCAD topographic mapping	
Check all that apply & explain below: <input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input checked="" type="checkbox"/> Other		

Wetland hydrology present? Yes No

Rationale for decision/remarks: Observed evidence of hydrology.

Routine Wetland Determination

DATA FORM

Based upon 1987 Corps Wetland Delineation Manual

SOILS

Map Unit Name (Series and Phase) : Newark silt loam

Drainage Class

Taxonomy (subgroup) Nw

Field observations confirm mapped type? Yes No

Hydric Soil Indicators: (check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Histosol | <input checked="" type="checkbox"/> Matrix chroma \leq 2 with mottles |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> Mg or Fe Concretions |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils |
| <input type="checkbox"/> Aquic Moisture Regime | <input type="checkbox"/> Organic Streaking in Sandy Soils |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National/Local Hydric Soils List |
| <input checked="" type="checkbox"/> Gleyed or Low-Chroma (=1) matrix | <input type="checkbox"/> Other (explain in remarks) |

Soil Matrix: 10YR 5/1

Soil Mottle: 10 YR 4/6

Hydric soils present? Yes No

Rationale for decision/Remarks: Hydric soil chromatic criteria met with the presence of mottles.

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks: All three wetland criteria met.

Photo:



House Run
Wetland Data Sheets

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont (DRAFT)

Project/Site: Foundation 404 City/County: Greene Co. Sampling Date: 4/20/11
 Applicant/Owner: Alpha State: PA Sampling Point: F-4
 Investigator(s): B. Armstrong Section, Township, Range: Center Twp.
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Concave
 Slope (%): _____ Lat: 39.855637 Long: 80.319461 Datum: NAD 27 PA South
 Soil Map Unit Name: Newark silt loam (NW) NWI classification: Pem

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ F-4
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) _____ True Aquatic Plants (B14) _____ High Water Table (A2) _____ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> 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) <input checked="" type="checkbox"/> Algal Mat or Crust (B4) _____ Other (Explain in Remarks) _____ Iron Deposits (B5) _____ Inundation Visible on Aerial Imagery (B7) _____ Water-Stained Leaves (B9) _____ Aquatic Fauna (B13)	Secondary Indicators (minimum of two required) _____ Surface Soil Cracks (B6) _____ Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>3</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>Surface</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:	

VEGETATION – Use scientific names of plants.

Sampling Point: F-4

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: _____)				
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
				_____ = Total Cover
Sapling Stratum (Plot size: _____)				
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
				_____ = Total Cover
Shrub Stratum (Plot size: _____)				
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
				_____ = Total Cover
Herb Stratum (Plot size: _____)				
1.	<u>Phalaris arundinacea</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>
2.	<u>Acorus calamus</u>	<u>15</u>	<u>Y</u>	<u>OBL</u>
3.	<u>Suncus effusus</u>	<u>1</u>	<u>N</u>	<u>FACW</u>
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____
9.	_____	_____	_____	_____
10.	_____	_____	_____	_____
11.	_____	_____	_____	_____
12.	_____	_____	_____	_____
				<u>56</u> = Total Cover
Woody Vine Stratum (Plot size: _____)				
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
				_____ = Total Cover

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0¹

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

___ Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No _____

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

SOIL

Sampling Point: F-4

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 4/3	100					silty loam	
3-16	10YR 5/1	90	7.5YR 5/8	10	C	PL	silty clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: **Indicators for Problematic Hydric Soils³:**

- | | | |
|--|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Dark Surface (S7) | <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148) | <input type="checkbox"/> Red Parent Material (TF2) |
| <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) | | |

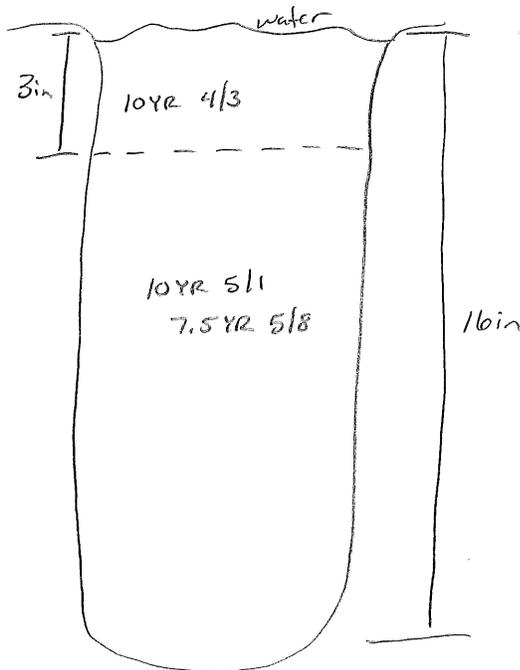
³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont (DRAFT)

Project/Site: Foundation 404 City/County: Greene Co. Sampling Date: 4/20/11
 Applicant/Owner: Alpha State: PA Sampling Point: F-5
 Investigator(s): B. Armstrong Section, Township, Range: Center Twp.
 Landform (hillslope, terrace, etc.): Top of slope / Floodplain Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 39.855115 Long: 80.32127 Datum: NAD 27 PA South
 Soil Map Unit Name: Newark silt loam (NW) NWI classification: P5m/P5s

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:			

HYDROLOGY

Wetland Hydrology Indicators:	<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<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 type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input checked="" type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	
Field Observations:	
Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>3</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>Surface</u> (includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <u>pic #1 - wetland</u> <u>#2 - upland</u>	

VEGETATION – Use scientific names of plants.

Sampling Point: F-5

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
				_____ = Total Cover
Sapling Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
				_____ = Total Cover
Shrub Stratum (Plot size: _____)				
1. <u>Rosa multiflora</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
				<u>10</u> = Total Cover
Herb Stratum (Plot size: _____)				
1. <u>Phytolacca arundinacea</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Lecythis pycnantha</u>	<u>8</u>	<u>Y</u>	<u>OBL</u>	
3. <u>Ranunculus spp.</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
4. <u>Ludwigia peruviana seedling</u>	<u>3</u>	<u>N</u>	<u>OBL</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
				<u>36</u> = Total Cover
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
				_____ = Total Cover

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

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

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

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

$$\begin{array}{r} 36 \\ .2 \\ \hline 7.2 \end{array}$$

SOIL

Sampling Point: F-5

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 5/3	100					silt loam	
2-16	10YR 5/2	95	7.5YR 6/8	5	C	PL	silt loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) (LRR N)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) (MLRA 147, 148)
- Thin Dark Surface (S9) (MLRA 147, 148)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) (LRR N, MLRA 136)
- Umbric Surface (F13) (MLRA 136, 122)
- Piedmont Floodplain Soils (F19) (MLRA 148)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (MLRA 147)
- Piedmont Floodplain Soils (F19) (MLRA 136, 147)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

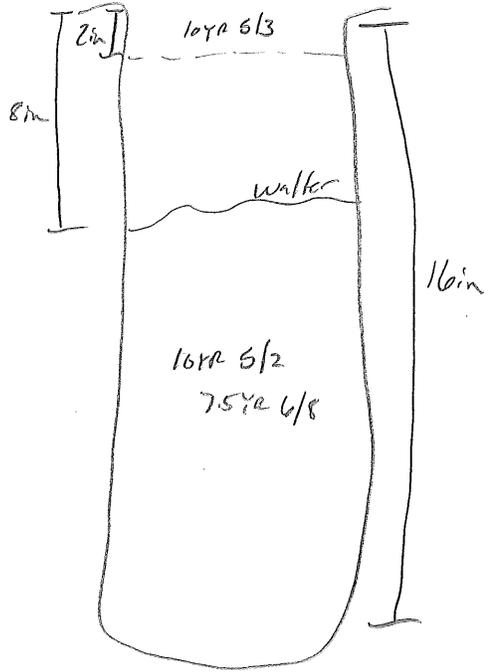
³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No _____

Remarks:



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont (DRAFT)

Project/Site: Foundation 404 City/County: Greene Co. Sampling Date: 4/20/11
 Applicant/Owner: Alpha State: PA Sampling Point: F-7
 Investigator(s): B. Armstrong Section, Township, Range: Center Twp.
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 39.054542 Long: 80.321754 Datum: NAD 27 PA South
 Soil Map Unit Name: Dormant-collected silt loams (D1F) NWI classification: PERM

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 _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1) _____ <input type="checkbox"/> High Water Table (A2) _____ <input checked="" type="checkbox"/> Saturation (A3) _____ <input type="checkbox"/> Water Marks (B1) _____ <input type="checkbox"/> Sediment Deposits (B2) _____ <input type="checkbox"/> Drift Deposits (B3) _____ <input checked="" type="checkbox"/> Algal Mat or Crust (B4) _____ <input type="checkbox"/> Iron Deposits (B5) _____ <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) _____ <input type="checkbox"/> Water-Stained Leaves (B9) _____ <input checked="" type="checkbox"/> Aquatic Fauna (B13) <i>Spring peepers, red spotted newts</i>	<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 type="checkbox"/> FAC-Neutral Test (D5) _____
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>1/2 - 4</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>surface</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____

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

Remarks:
 #5 - wetland
 #6 - upland

VEGETATION – Use scientific names of plants.

Sampling Point: F-7

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

Sapling Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Carex</i> spp.	20	Y	FACW
2. <i>Juncus effusus</i>	5	N	FACW
3. <i>Leersia oryzoides</i>	5	N	OBL
4. <i>Dipsacae sylvestris</i>	3	N	NI
5. <i>Epilobium cokratanum</i>	2	N	OBL
6. <i>Eupatorium perfoliatum</i>	1	N	FACW
7. <i>wormseed mustar</i>	1	N	FACW
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			

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

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 _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

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

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

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

37
12
7.4

SOIL

Sampling Point: F-7

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-1	10YR 4/2	100					Silt loam	
1-10	10YR 6/1	97	10YR 5/6	3	C	PL	Silt loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) (LRR N)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) (MLRA 147, 148)
- Thin Dark Surface (S9) (MLRA 147, 148)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) (LRR N, MLRA 136)
- Umbric Surface (F13) (MLRA 136, 122)
- Piedmont Floodplain Soils (F19) (MLRA 148)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (MLRA 147)
- Piedmont Floodplain Soils (F19) (MLRA 136, 147)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

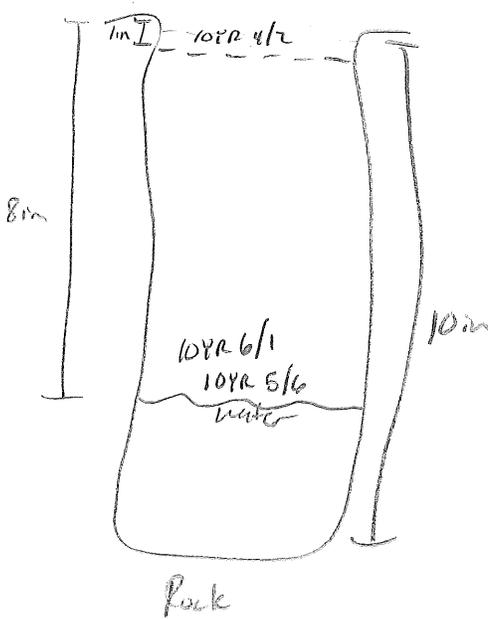
³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Rock
 Depth (inches): 10

Hydric Soil Present? Yes No

Remarks:



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont (DRAFT)

Project/Site: Foundation 404 City/County: Greene Co. Sampling Date: 4/28/11
 Applicant/Owner: Alpha State: PA Sampling Point: F-8
 Investigator(s): B. Armstrong Section, Township, Range: Center Twp.
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave
 Slope (%): _____ Lat: 39.854527 Long: 80.322037 Datum: NAD 27 PA South
 Soil Map Unit Name: Dorment-colleoka silt loam (D1F) NWI classification: PEM

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ F-8
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) _____ True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) _____ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) _____ Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) _____ Thin Muck Surface (C7) <input checked="" type="checkbox"/> Algal Mat or Crust (B4) _____ 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 checked="" type="checkbox"/> Aquatic Fauna (B13) <u>Red spotted newt, tadpoles</u>	<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 checked="" type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>6" - 1/2</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>Surface</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
---	--

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

Remarks:
 #3 wetland
 #4 upland

VEGETATION – Use scientific names of plants.

Sampling Point: FB

<u>Tree Stratum</u> (Plot size: _____)	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
_____ = Total Cover			
<u>Sapling Stratum</u> (Plot size: _____)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
_____ = Total Cover			
<u>Shrub Stratum</u> (Plot size: _____)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
_____ = Total Cover			
<u>Herb Stratum</u> (Plot size: _____)			
1. <i>Carex</i> spp.	25	Y	FACW
2. <i>Leersia oryzoides</i>	15	Y	OBL
3. <i>Juncus effusus</i>	5	N	FACW
4. <i>Nasturtium</i> spp.	5	N	OBL
5. <i>Dipsacus sylvestris</i>	3	N	NI
6. <i>Ludwigia alternifolia</i>	2	N	OBL
7. <i>Epilobium coloratum</i>	2	N	OBL
8. <i>Viola</i> spp.	1	N	FAC
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
58 = Total Cover			
<u>Woody Vine Stratum</u> (Plot size: _____)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
_____ = Total Cover			

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

____ Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

____ Prevalence Index is ≤3.0¹

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

____ Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No _____

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

58
ITC

SOIL

Sampling Point: F-8

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 6/1	90	10YR 5/6	10	C	PL	silt loam	
6-18	10YR 4/1	85	10YR 6/8	15	C	M	silt loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

- | | | |
|--|---|--|
| <p>Hydric Soil Indicators:</p> <ul style="list-style-type: none"> <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) | <ul style="list-style-type: none"> <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) | <p>Indicators for Problematic Hydric Soils³:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 2 cm Muck (A10) (MLRA 147) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks) |
|--|---|--|

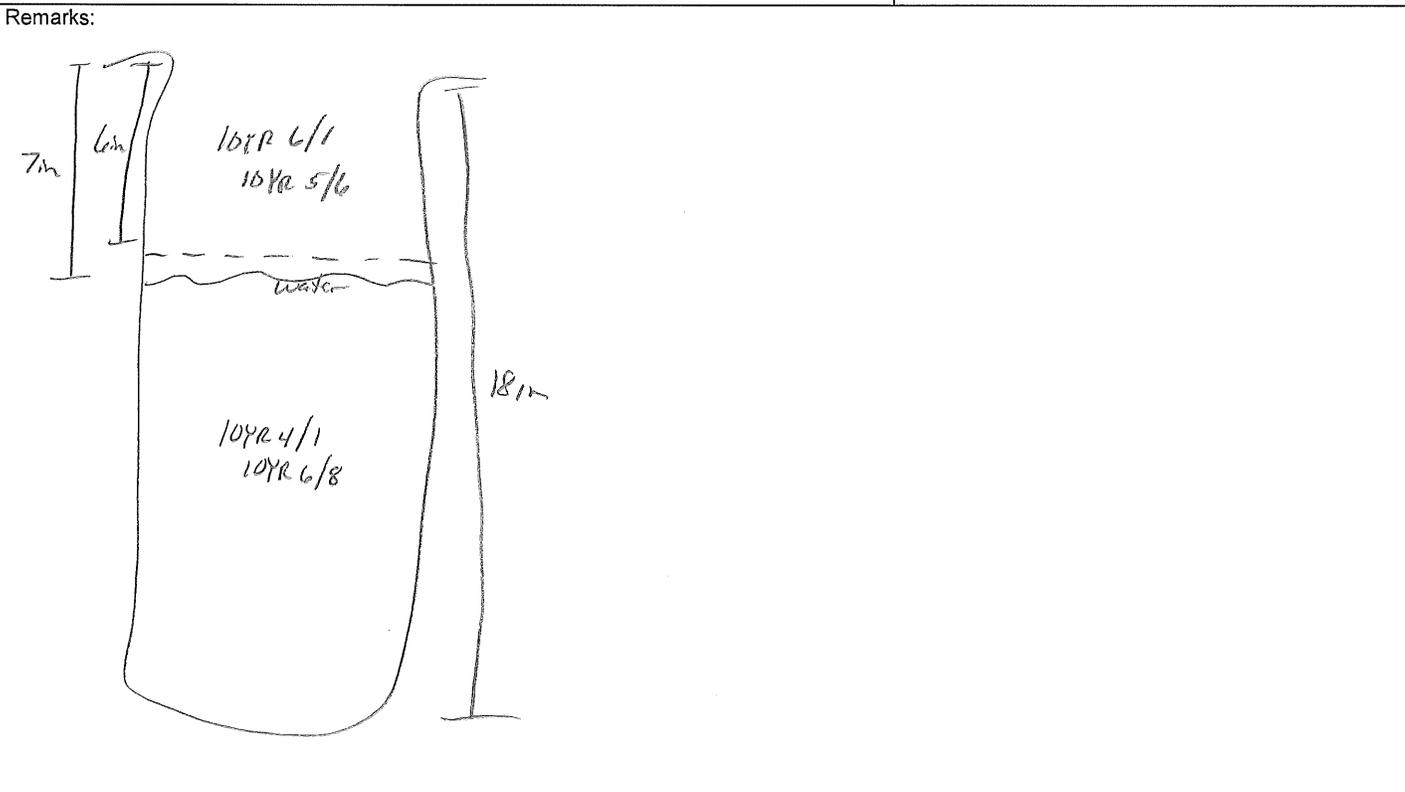
³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont (DRAFT)

Project/Site: Foundation 404 City/County: Greene Co. Sampling Date: ~~3/19/11~~ 4/19/11
 Applicant/Owner: Alpha State: PA Sampling Point: F-31
 Investigator(s): B. Armstrong Section, Township, Range: Center Twp
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave
 Slope (%): _____ Lat: 39.866271 Long: 80.329331 Datum: NAD 27 PA South
 Soil Map Unit Name: Dormant - culleoka silt loams (DTF) NWI classification: PEM

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

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

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

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ True Aquatic Plants (B14) ___ High Water Table (A2) ___ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> 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)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <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>surface</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:
Heavy rain during site visit

VEGETATION – Use scientific names of plants.

Sampling Point: F-31

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

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Sapling Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>23</u>	x 2 = <u>46</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>16</u>	x 4 = <u>64</u>
UPL species <u>2</u>	x 5 = <u>10</u>
Column Totals: <u>41</u> (A)	<u>120</u> (B)

Prevalence Index = B/A = 2.9

2
16
64
4
48
82
4

Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

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

Problematic Hydrophytic Vegetation¹ (Explain)

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

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Carex spp.</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>
2. <u>Grasses</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>
3. <u>Phalaris arundinacea</u>	<u>3</u>	<u>N</u>	<u>FACW</u>
4. <u>Daucus carota</u>	<u>2</u>	<u>N</u>	<u>UPL</u>
5. <u>Solidago spp.</u>	<u>1</u>	<u>N</u>	<u>FACU</u>
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____

Definitions of Vegetation Strata:

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

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

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

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

Woody vine – All woody vines, regardless of height.

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

Hydrophytic Vegetation Present? Yes No

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

41 / 120 = 2.91

41 / 1480 = 0.027

20.5 / 8.2 = 2.5

2.91
41 / 120
82
380
369
110

SOIL

Sampling Point: F-31

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 5/1	95	7.5YR 6/8	5	C	PL	Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

- | | | |
|--|---|--|
| Hydric Soil Indicators:
<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) | Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)
<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147)
<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks) |
|--|---|--|

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

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:



Routine Wetland Determination

DATA FORM

Based upon 1987 Corps Wetland Delineation Manual

Project/Site: Foundation Shaft and Slope	Date: 6/27/08
Applicant/owner: Foundation Coal	County: Greene
Investigator(s): JN	State: PA
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: PEM Transect ID: Wetland E Plot ID:
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Explanation of atypical or problem area:	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species (Common Name)	Dominant Plant Species (Scientific Name)	Strata	Indicator Status
Hop Sedge	<i>Carex lupulina</i>	H	OBL
Rice Cutgrass	<i>Leersia oryzoides</i>	H	OBL
Jewelweed	<i>Impatiens capensis</i>	H	FACW
Common Boneset	<i>Eupatorium perfoliatum</i>	H	FACW+

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100%

Check all indicators that apply and explain below:

- | | |
|--|--|
| <input type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation | <input type="checkbox"/> Physiological/reproductive adaptations |
| <input type="checkbox"/> Morphological adaptations | <input checked="" type="checkbox"/> Wetland plant database |
| <input type="checkbox"/> Technical Literature | <input checked="" type="checkbox"/> Personal knowledge of regional plant communities |
| | <input type="checkbox"/> Other (explain) |

Hydrophytic vegetation present? Yes No

Rationale for decision/Remarks: Greater than 50% of dominant vegetation is OBL, FACW, or FAC.

HYDROLOGY

Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Water Marks: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>on stems, ground</i>	Sediment Deposits: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)	Drift Lines: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Drainage Patterns: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth of inundation: _____ inches	Oxidized Root (live roots) Channels <12in.: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Local Soil Survey: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth to free water in pit: _____ inches	FAC Neutral: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water-stained Leaves: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Depth to saturated soil: _____	Other (explain): AutoCAD topographic mapping	
Check all that apply & explain below: <input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input checked="" type="checkbox"/> Other		

Wetland hydrology present? Yes No

Rationale for decision/remarks: Observed evidence of hydrology.

Routine Wetland Determination

DATA FORM

Based upon 1987 Corps Wetland Delineation Manual

SOILS

Map Unit Name (Series and Phase) : Dormont-Culleoka silt loam Drainage Class _____
 Field observations confirm mapped type? Yes No

Taxonomy (subgroup) DtF _____

Hydric Soil Indicators: (check all that apply)

- | | |
|---|---|
| <input type="checkbox"/> Histosol | <input checked="" type="checkbox"/> Matrix chroma \leq 2 with mottles |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> Mg or Fe Concretions |
| <input checked="" type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils |
| <input type="checkbox"/> Aquic Moisture Regime | <input type="checkbox"/> Organic Streaking in Sandy Soils |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National/Local Hydric Soils List |
| <input type="checkbox"/> Gleyed or Low-Chroma (=1) matrix | <input type="checkbox"/> Other (explain in remarks) |

Soil Matrix: 2.5Y 3/2

Soil Mottle: _____

Hydric soils present? Yes No

Rationale for decision/Remarks: _____

Wetland Determination

- Hydrophytic vegetation present? Yes No
- Hydric soils present? Yes No
- Wetland hydrology present? Yes No
- Is the sampling point within a wetland? Yes No

Rationale/Remarks: All three wetland criteria met.

Photo:



McCourtney Run
Wetland Data Sheets

**Routine Wetland Determination
DATA FORM**
Based upon 1987 Corps Wetland Delineation Manual

SOILS	
Map Unit Name (Series and Phase) :	Drainage Class
Taxonomy (subgroup)	Field observations confirm mapped type? <input type="checkbox"/> Yes <input type="checkbox"/> No
Hydric Soil Indicators: (check all that apply)	
<input type="checkbox"/> Histosol	<input type="checkbox"/> Matrix chroma \leq 2 with mottles
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> Mg or Fe Concretions
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils
<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Organic Streaking in Sandy Soils
<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Listed on National/Local Hydric Soils List
<input type="checkbox"/> Gleyed or Low-Chroma (=1) matrix	<input type="checkbox"/> Other (explain in remarks)
Soil Matrix:	Soil Mottle:
Hydric soils present? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Rationale for decision/Remarks:	
Wetland Determination	
Hydrophytic vegetation present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Hydric soils present? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Wetland hydrology present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Is the sampling point within a wetland? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Rationale/Remarks: Veg and hydrology passed, no soils taken due to conditions.	

Photo:



WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Foundation Mine City/County: Greene Sampling Date: 6.1.2011
 Applicant/Owner: Alpha State: PA Sampling Point: F-73
 Investigator(s): MW, CW, Kevin Gabig Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR or MLRA): _____ Lat: 39.866277 Long: -80.289316 Datum: _____
 Soil Map Unit Name: D+D NWI classification: 80% PEM, 20% PSS
 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 _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: <div style="font-size: 1.2em; font-family: cursive;"> F-73 Wetland identified and delineated during JD fieldview with ACOE 6.1.2011 </div>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1) ___ True Aquatic Plants (B14) ___ High Water Table (A2) ___ Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> 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) <input checked="" type="checkbox"/> 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)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) <input checked="" type="checkbox"/> Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
---	--

Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ 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: F-73

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: _____)					
1. <u>Salix nigra</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
Sapling/Shrub Stratum (Plot size: _____)					
1. <u>Elderberry</u>					
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
_____ = Total Cover					
Herb Stratum (Plot size: _____)					
1. <u>Eupatorium perfoliatum</u>				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Carex</u>					
3. <u>Onoclea sensibilis</u>					
4. <u>Impatiens capensis</u>					
5. <u>Juncus effusus</u>					
6. <u>Solidago</u>					
7. <u>Apocynum</u>					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
_____ = Total Cover					
Woody Vine Stratum (Plot size: _____)					
1. _____				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.	
2. _____					
3. _____					
4. _____					
5. _____					
6. _____					
_____ = Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

SOIL

Sampling Point: F-73

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

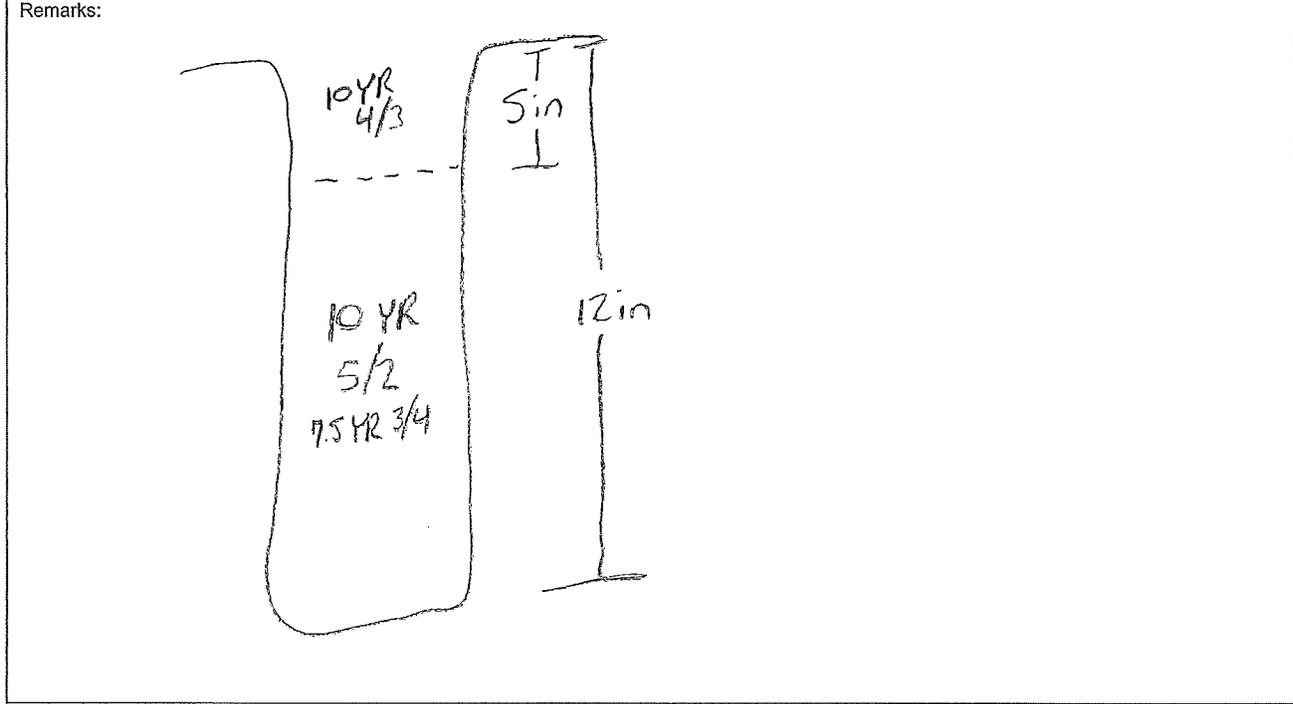
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 4/3	100					LocM	
5-12	10YR 5/2	95	7.5YR 3/4	5	C	M		

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

- Hydric Soil Indicators:**
- Histosol (A1)
 - Histic Epipedon (A2)
 - Black Histic (A3)
 - Hydrogen Sulfide (A4)
 - Stratified Layers (A5)
 - 2 cm Muck (A10) (LRR N)
 - Depleted Below Dark Surface (A11)
 - Thick Dark Surface (A12)
 - Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)
 - Sandy Gleyed Matrix (S4)
 - Sandy Redox (S5)
 - Stripped Matrix (S6)
 - Dark Surface (S7)
 - Polyvalue Below Surface (S8) (MLRA 147, 148)
 - Thin Dark Surface (S9) (MLRA 147, 148)
 - Loamy Gleyed Matrix (F2)
 - Depleted Matrix (F3)
 - Redox Dark Surface (F6)
 - Depleted Dark Surface (F7)
 - Redox Depressions (F8)
 - Iron-Manganese Masses (F12) (LRR N, MLRA 136)
 - Umbric Surface (F13) (MLRA 136, 122)
 - Piedmont Floodplain Soils (F19) (MLRA 148)
- Indicators for Problematic Hydric Soils³:**
- 2 cm Muck (A10) (MLRA 147)
 - Coast Prairie Redox (A16) (MLRA 147, 148)
 - Piedmont Floodplain Soils (F19) (MLRA 136, 147)
 - Red Parent Material (TF2)
 - Very Shallow Dark Surface (TF12)
 - Other (Explain in Remarks)
- ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No





Routine Wetland Determination

DATA FORM

Based upon 1987 Corps Wetland Delineation Manual

Project/Site: Foundation Rail Siding & Prep Plant		Date: 5/20/2008	
Applicant/owner:		County: Greene	
Investigator(s): BKA		State: PA	
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Community ID: Wetland F	
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Transect ID: PEM/PSS	
Explanation of atypical or problem area:		Plot ID:	
VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)			
Dominant Plant Species (Common Name)	Dominant Plant Species (Scientific Name)	Strata	Indicator Status
Spotted touch-me-not	<i>Impatiens capensis</i>	H	FACW
Stiff marsh bedstraw	<i>Galium tinctorium</i>	H	OBL
Common blue violet	<i>Viola papilionacea</i>	H	FAC
Spicebush	<i>Lindera benzoin</i>	S	FACW-
HYDROPHYTIC VEGETATION INDICATORS:			
% of dominants OBL, FACW, & FAC: 100%			
Check all indicators that apply and explain below:			
<input checked="" type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation		<input type="checkbox"/> Physiological/reproductive adaptations	
<input type="checkbox"/> Morphological adaptations		<input checked="" type="checkbox"/> Wetland plant database	
<input type="checkbox"/> Technical Literature		<input checked="" type="checkbox"/> Personal knowledge of regional plant communities	
		<input type="checkbox"/> Other (explain)	
Hydrophytic vegetation present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Rationale for decision/Remarks: Greater than 50% of dominant vegetation is OBL, FACW, or FAC.			
HYDROLOGY			
Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Water Marks: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>on stems, ground</i>	Sediment Deposits: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)		Drift Lines: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Drainage Patterns: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth of inundation: 1 inches	Oxidized Root (live roots) Channels <12 in.: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Local Soil Survey: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Depth to free water in pit: inches	FAC Neutral: <input type="checkbox"/> Yes <input type="checkbox"/> No	Water-stained Leaves: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Depth to saturated soil:			
Check all that apply & explain below: <input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input checked="" type="checkbox"/> Other		Other (explain): AutoCAD topographic mapping	
Wetland hydrology present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Rationale for decision/remarks: Observed evidence of hydrology.			

**Routine Wetland Determination
DATA FORM**
Based upon 1987 Corps Wetland Delineation Manual

SOILS	
Map Unit Name (Series and Phase) :Dormont silt loam (DoD)	Drainage Class
Taxonomy (subgroup)	Field observations confirm mapped type? <input type="checkbox"/> Yes <input type="checkbox"/> No
Hydric Soil Indicators: (check all that apply)	
<input type="checkbox"/> Histosol	<input checked="" type="checkbox"/> Matrix chroma \leq 2 with mottles
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> Mg or Fe Concretions
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils
<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Organic Streaking in Sandy Soils
<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Listed on National/Local Hydric Soils List
<input checked="" type="checkbox"/> Gleyed or Low-Chroma (=1) matrix	<input type="checkbox"/> Other (explain in remarks)
Soil Matrix: 2.5Y 5/1	Soil Mottle: 10YR 7/6
Hydric soils present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Rationale for decision/Remarks: Hydric soil chromatic criteria met with the presence of mottles.	
Wetland Determination	
Hydrophytic vegetation present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Hydric soils present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland hydrology present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is the sampling point within a wetland?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Rationale/Remarks: All three wetland criteria met.	

Photo: Wetland F





Routine Wetland Determination

DATA FORM

Based upon 1987 Corps Wetland Delineation Manual

Project/Site: Foundation Rail Siding & Prep Plant		Date: 5/20/2008	
Applicant/owner:		County: Greene	
Investigator(s): BKA		State: PA	
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Community ID: Wetland G	
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Transect ID: PEM/PSS/PFO	
Explanation of atypical or problem area:		Plot ID:	
VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)			
Dominant Plant Species (Common Name)	Dominant Plant Species (Scientific Name)	Strata	Indicator Status
Broad-leaf cattail	<i>Typha latifolia</i>	H	OBL
Yellow rocket	<i>Barbarea vulgaris</i>	H	FACU
Sensitive fern	<i>Onoclea sensibilis</i>	H	FACW
Black willow	<i>Salix nigra</i>	T	FACW+
Spicebush	<i>Lindera benzoin</i>	S	FACW-
Spotted touch-me-not	<i>Impatiens capensis</i>	H	FACW
HYDROPHYTIC VEGETATION INDICATORS:			
% of dominants OBL, FACW, & FAC: 83%			
Check all indicators that apply and explain below:			
<input checked="" type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation		<input type="checkbox"/> Physiological/reproductive adaptations	
<input type="checkbox"/> Morphological adaptations		<input checked="" type="checkbox"/> Wetland plant database	
<input type="checkbox"/> Technical Literature		<input checked="" type="checkbox"/> Personal knowledge of regional plant communities	
		<input type="checkbox"/> Other (explain)	
Hydrophytic vegetation present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Rationale for decision/Remarks: Greater than 50% of dominant vegetation is OBL, FACW, or FAC.			
HYDROLOGY			
Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Water Marks: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>on stems, ground</i>	Sediment Deposits: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)		Drift Lines: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Drainage Patterns: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth of inundation: 1 inches	Oxidized Root (live roots) Channels <12 in.: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Local Soil Survey: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Depth to free water in pit: inches	FAC Neutral: <input type="checkbox"/> Yes <input type="checkbox"/> No	Water-stained Leaves: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Depth to saturated soil:			
Check all that apply & explain below: <input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input checked="" type="checkbox"/> Other		Other (explain): AutoCAD topographic mapping	
Wetland hydrology present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Rationale for decision/remarks: Observed evidence of hydrology.			

Routine Wetland Determination
DATA FORM
 Based upon 1987 Corps Wetland Delineation Manual

SOILS

Map Unit Name (Series and Phase) :Dormont-Culleoka silt loam (DtD)

Drainage Class

Taxonomy (subgroup)

Field observations confirm mapped type? Yes No

Hydric Soil Indicators: (check all that apply)

- | | |
|---|---|
| <input type="checkbox"/> Histosol | <input checked="" type="checkbox"/> Matrix chroma \leq 2 with mottles |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> Mg or Fe Concretions |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils |
| <input type="checkbox"/> Aquic Moisture Regime | <input type="checkbox"/> Organic Streaking in Sandy Soils |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National/Local Hydric Soils List |
| <input type="checkbox"/> Gleyed or Low-Chroma (=1) matrix | <input type="checkbox"/> Other (explain in remarks) |

Soil Matrix: 2.5Y 5/2

Soil Mottle: 10YR 7/4

Hydric soils present? Yes No

Rationale for decision/Remarks: Hydric soil chromatic criteria met with the presence of mottles.

Wetland Determination

Hydrophytic vegetation present? Yes No

Hydric soils present? Yes No

Wetland hydrology present? Yes No

Is the sampling point within a wetland? Yes No

Rationale/Remarks: All three wetland criteria met.

Photo: WETLAND G





Routine Wetland Determination

DATA FORM

Based upon 1987 Corps Wetland Delineation Manual

Project/Site: Foundation Rail Siding & Prep Plant		Date: 5/20/2008	
Applicant/owner:		County: Greene	
Investigator(s): BKA		State: PA	
Do normal circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Community ID: Wetland K	
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Transect ID: PEM	
Explanation of atypical or problem area:		Plot ID:	
VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)			
Dominant Plant Species (Common Name)	Dominant Plant Species (Scientific Name)	Strata	Indicator Status
Reed canary grass	<i>Phalaris arundinacea</i>	H	FACW+
Spotted touch-me-not	<i>Impatiens capensis</i>	H	FACW
Yellow rocket	<i>Barbarea vulgaris</i>	H	FACU
Stiff marsh bedstraw	<i>Galium tinctorium</i>	H	OBL
HYDROPHYTIC VEGETATION INDICATORS:			
% of dominants OBL, FACW, & FAC: 75%			
Check all indicators that apply and explain below:			
<input checked="" type="checkbox"/> Visual observation of plant species growing in areas of prolonged inundation/saturation		<input type="checkbox"/> Physiological/reproductive adaptations	
<input type="checkbox"/> Morphological adaptations		<input checked="" type="checkbox"/> Wetland plant database	
<input type="checkbox"/> Technical Literature		<input checked="" type="checkbox"/> Personal knowledge of regional plant communities	
		<input type="checkbox"/> Other (explain)	
Hydrophytic vegetation present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Rationale for decision/Remarks: Greater than 50% of dominant vegetation is OBL, FACW, or FAC.			
HYDROLOGY			
Is it the growing season? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Water Marks: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No on stems, ground	Sediment Deposits: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Based on: <input type="checkbox"/> Soil temp (record temp) <input type="checkbox"/> Other (explain)		Drift Lines: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Drainage Patterns: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth of inundation: 1 inches		Oxidized Root (live roots) Channels <12in: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Local Soil Survey: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Depth to free water in pit: inches		FAC Neutral: <input type="checkbox"/> Yes <input type="checkbox"/> No	Water-stained Leaves: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Depth to saturated soil:			
Check all that apply & explain below: <input type="checkbox"/> Stream, lake or gage data <input type="checkbox"/> Aerial photographs <input checked="" type="checkbox"/> Other		Other (explain): AutoCAD topographic mapping	
Wetland hydrology present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Rationale for decision/remarks: Observed evidence of hydrology.			

Routine Wetland Determination
DATA FORM
 Based upon 1987 Corps Wetland Delineation Manual

SOILS

Map Unit Name (Series and Phase) :Dormont silt loam (DoD)

Drainage Class

Taxonomy (subgroup)

Field observations confirm mapped type? Yes No

Hydric Soil Indicators: (check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Histosol | <input checked="" type="checkbox"/> Matrix chroma \leq 2 with mottles |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> Mg or Fe Concretions |
| <input checked="" type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> High Organic Content in Surface Layer of Sandy Soils |
| <input type="checkbox"/> Aquic Moisture Regime | <input type="checkbox"/> Organic Streaking in Sandy Soils |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National/Local Hydric Soils List |
| <input checked="" type="checkbox"/> Gleyed or Low-Chroma (=1) matrix | <input type="checkbox"/> Other (explain in remarks) |

Soil Matrix: 2.5Y 4/1

Soil Mottle: 7.5YR 5/6

Hydric soils present? Yes No

Rationale for decision/Remarks: Hydric soil chromatic criteria met with the presence of mottles.

Wetland Determination

- | | | |
|---|---|-----------------------------|
| Hydrophytic vegetation present? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Hydric soils present? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Wetland hydrology present? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Is the sampling point within a wetland? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |

Rationale/Remarks: All three wetland criteria met.

Photo:



South Fork Tenmile Creek
Wetland Data Sheets

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

Sampling Point: F-72

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
<u>Sapling/Shrub Stratum</u> (Plot size: _____)	1. _____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
_____ = Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
<u>Herb Stratum</u> (Plot size: _____)	1. <u>Solidago Spp.</u>	_____	_____		
2. <u>Carex Spp</u>	_____	_____			
3. <u>Eupatorium perfoliatum</u>	_____	_____			
4. <u>Juncus effusus</u>	_____	_____			
5. <u>Apoecynum</u>	_____	_____			
6. _____	_____	_____			
7. _____	_____	_____			
8. _____	_____	_____			
9. _____	_____	_____			
10. _____	_____	_____			
11. _____	_____	_____			
12. _____	_____	_____			
_____ = Total Cover				Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.	
<u>Woody Vine Stratum</u> (Plot size: _____)	1. _____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
_____ = Total Cover					Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: (Include photo numbers here or on a separate sheet.) 					

SOIL

Sampling Point: F-72

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 3/1	100					Loam	
4-16	2.5YR 5/1	98	10YR 5/4	2	C	PL	Clay Loam	

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

- | | | |
|--|---|--|
| <p>Hydric Soil Indicators:</p> <ul style="list-style-type: none"> <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) | <ul style="list-style-type: none"> <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) | <p>Indicators for Problematic Hydric Soils³:</p> <ul style="list-style-type: none"> <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"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks) |
|--|---|--|

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

Restrictive Layer (if observed):
 Type: _____
 Depth (Inches): _____

Hydric Soil Present? Yes No

