



DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT, CORPS OF ENGINEERS
2 HOPKINS PLAZA
BALTIMORE, MARYLAND 21203-1715

6/19/2020

CENAB-PL-I

MEMORANDUM FOR: Harvey Johnson, U.S. Army Corps of Engineers, Program Manager,
Programs and Project Management Division

SUBJECT: Specimen Tree Survey and Wetland Delineation for proposed entrance road to
Bureau of Engraving and Printing (BEP) site at the Beltsville Agricultural Research Center
(BARC), Prince George's County, Maryland

1. On 3 April 2020, the U.S. Army Corps of Engineers (USACE), Baltimore District, Planning Division, surveyed specimen trees and performed on-site vegetation and soil sampling in order to determine the location and legally defensible extent of wetland areas and streams (Waters of the United States [WUS]), in accordance with the most recent regulatory guidance, in the area of potential disturbance for the proposed entrance road to the proposed BEP site on Poultry Road in BARC, Prince George's County, Maryland.
2. Twenty specimen trees were flagged and GPS located within the proposed entrance road alignment. Trees numbered 189 through 208 were added to the specimen tree list from the main site. The species (common and scientific name) and general health condition, along with any relevant comments concerning the trees are included in the enclosed specimen tree list (see Enclosures 1 and 4).
3. Wetland delineation was performed following current delineation practices and requirements, pursuant to the 1987 *Corps of Engineers Wetland Delineation Manual* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0)*. Streams and wetland boundaries were marked with consecutively numbered pink glow survey flagging. The field survey was completed using Trimble GeoXH handheld Global Positioning System (GPS), in order to collect location data for each wetland delineation flag and soil sample point. This survey horizontally references the North American Datum of 1983 (NAD83), Maryland State Plane Coordinate System. GPS data collection yielded sub-meter horizontal accuracy. This data was then transferred into ArcPro for analysis and mapping.
4. Two wetlands (Wetland 7 and 8) associated with an unnamed tributary (previously delineated as WUS-4, an intermittent stream) to the Beaver Dam Creek, were delineated within the area of the proposed entrance road. Both wetlands drain to the unnamed tributary, which is located off-site and flows south, under Powder Mill Road. Portions of WUS-4 were delineated within the study area, as well as an intermittent stream channel (WUS-6), which drains Wetland 8 to WUS-4. The attached map (Enclosure 1) depicts the streams and wetlands which were delineated. The two wetlands and the unnamed tributaries are subject to regulation under Section 404 of the Clean Water Act.

5. Wetlands 7 and 8 are classified as palustrine emergent with non-persistent vegetation and a seasonally flooded/saturated water regime (PEM2E). Dominant vegetation in Wetland 7 included bent grass (*Agrostis stolonifera*) and reed-canary grass (*Phalaris arundinacea*). Dominant vegetation in Wetland 8 included broad-leaved cattail (*Typha latifolia*) and soft rush (*Juncus effuses*). Indicators for wetland hydrology, for both wetlands, were oxidized rhizospheres along living roots, inundation, and geomorphic position. The soil matrix was predominantly 10YR 4/2 with redoximorphic features of 7.5YR 4/6, which meets the hydric soil criteria for a depleted matrix. Enclosure 2 includes photos of the wetlands and the unnamed tributaries. Both unnamed tributaries to the Beaver Dam Creek (WUS-4 and WUS-6) are classified as riverine intermittent with stream channels of cobble, gravel and sand (R3SB1/2).

6. Any impacts from the proposed entrance road to the specimen trees will require coordination with Maryland Department of Natural Resources in regards to mitigation/reforestation during forest conservation planning. Any impacts to wetlands and/or the unnamed tributaries to Beaver Creek, which flows to Indian Creek and then the Anacostia River, will require coordination with USACE Regulatory Branch and Maryland Department of the Environment (MDE), specifically in regards to potential permitting actions within Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, and all other potential permitting actions issued through USACE.

Sincerely,



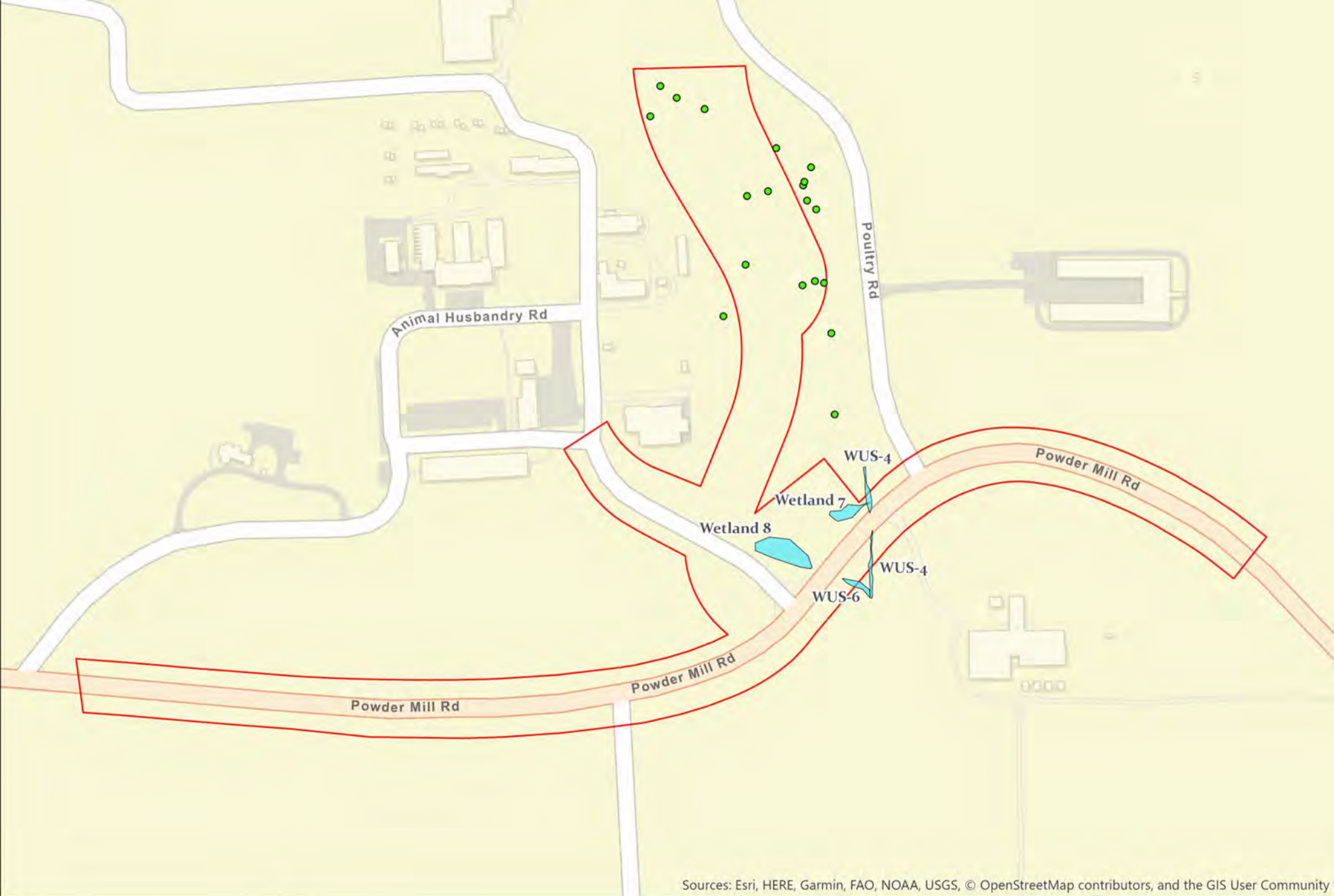
MICHAEL J. SCHUSTER
Installation Support Branch Chief,
Planning Division

Enclosures:

- Enclosure 1: Wetland/Specimen Tree Map
- Enclosure 2: Field Photographs
- Enclosure 3: Wetland Data Sheets
- Enclosure 4: Specimen Tree List

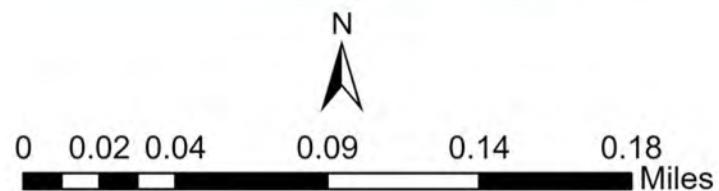
ENCLOSURE 1:
Wetland/Specimen Tree Mapping




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Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Enclosure 1



-  Specimen_Trees
-  Wetlands_and_Streams
-  Entrance_Rd_Boundary

ENCLOSURE 2:
Field Photographs

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Enclosure 2: Field Photographs



Photo 1: WUS-4, intermittent channel,
Looking upstream



Photo 2: WUS-4, intermittent channel, upstream side
of bridge under Powder Mill Road



Photo 3: Wetland 7, looking northwest



Photo 4: Wetland 8, looking north

Enclosure 2: Field Photographs



Photo 5: Short channel that drains Wetland 7 to WUS-4



Photo 6: WUS-6, intermittent channel that drains Wetland 8 to WUS-4



Photo 7: GPS location of specimen tree

ENCLOSURE 3:
Wetland Data Sheets

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WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Bureau of Engraving and Printing on BARC City/County: Greenbelt/PG Sampling Date: 4/3/20

Applicant/Owner: Bureau of Engraving and Printing State: MD Sampling Point: DP-8

Investigator(s): DRC/LJ/CO Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Flat pasture Local relief (concave, convex, none): concave Slope (%): 1-3%

Subregion (LRR or MLRA): MLRA S/LRR 149A Lat: 39° 01' 59.75" Long: 76° 52' 54.17" Datum: NAD 83

Soil Map Unit Name: Christiana-Downer Complex, 5-10% slopes NWI classification: PEM

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

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

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

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

<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Hydrophytic Vegetation Present?</td> <td style="width: 10%;">Yes</td> <td style="width: 10%; text-align: center;"><u>X</u></td> <td style="width: 10%;">No</td> <td style="width: 40%;"></td> </tr> <tr> <td>Hydric Soil Present?</td> <td>Yes</td> <td style="text-align: center;"><u>X</u></td> <td>No</td> <td></td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td>Yes</td> <td style="text-align: center;"><u>X</u></td> <td>No</td> <td></td> </tr> </table>	Hydrophytic Vegetation Present?	Yes	<u>X</u>	No		Hydric Soil Present?	Yes	<u>X</u>	No		Wetland Hydrology Present?	Yes	<u>X</u>	No		<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">Is the Sampled Area within a Wetland?</td> <td style="width: 20%;">Yes</td> <td style="width: 10%; text-align: center;"><u>X</u></td> <td style="width: 10%;">No</td> <td style="width: 10%;"></td> </tr> </table>	Is the Sampled Area within a Wetland?	Yes	<u>X</u>	No	
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Hydric Soil Present?	Yes	<u>X</u>	No																		
Wetland Hydrology Present?	Yes	<u>X</u>	No																		
Is the Sampled Area within a Wetland?	Yes	<u>X</u>	No																		
Remarks: Wetland 7 Data point. Wetland located on bench above WUS-4.																					

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;"> <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) </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Oxidized Rhizospheres along 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) </td> </tr> </table>	<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 type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Oxidized Rhizospheres along 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)	<u>Secondary Indicators (minimum of two required)</u> <table style="width: 100%; border-collapse: collapse;"> <tr><td><input type="checkbox"/> Surface Soil Cracks (B6)</td></tr> <tr><td><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</td></tr> <tr><td><input type="checkbox"/> Drainage Patterns (B10)</td></tr> <tr><td><input type="checkbox"/> Moss Trim Lines (B16)</td></tr> <tr><td><input type="checkbox"/> Dry-Season Water Table (C2)</td></tr> <tr><td><input type="checkbox"/> Crayfish Burrows (C8)</td></tr> <tr><td><input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</td></tr> <tr><td><input checked="" type="checkbox"/> Geomorphic Position (D2)</td></tr> <tr><td><input type="checkbox"/> Shallow Aquitard (D3)</td></tr> <tr><td><input type="checkbox"/> FAC-Neutral Test (D5)</td></tr> <tr><td><input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U)</td></tr> </table>	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)	<input type="checkbox"/> FAC-Neutral Test (D5)	<input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U)
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<input type="checkbox"/> FAC-Neutral Test (D5)														
<input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U)														

Field Observations:					
Surface Water Present?	Yes	<u>X</u>	No	Depth (inches):	<u>2"</u>
Water Table Present?	Yes		No	Depth (inches):	
Saturation Present?					
(includes capillary fringe)	Yes	<u>X</u>	No	Depth (inches):	<u>0"</u>
				Wetland Hydrology Present?	Yes <u>X</u> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks: Toe of slope of open pasture, above intermittent stream channel (WUS-4).					

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

Tree Stratum (Plot Size: 20-foot radius plot)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
		= Total Cover	
50% of total cover:	_____	20% of total cover:	_____

Sapling Stratum (Plot Size: 20-foot radius plot)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
		= Total Cover	
50% of total cover:	_____	20% of total cover:	_____

Shrub Stratum (Plot Size: 20-foot radius plot)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
		= Total Cover	
50% of total cover:	_____	20% of total cover:	_____

Herb Stratum (Plot Size: 10-foot radius plot)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Agrostis stolonifera</i>	80	Y	FACW
2. <i>Phalaris arundinacea</i>	20	N	FACW
3. <i>Ranunculus repens</i>	10	N	FAC
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
		= Total Cover	
50% of total cover:	110	20% of total cover:	22

Woody Vine Stratum (Plot Size: 20-foot radius plot)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
		= Total Cover	
50% of total cover:	_____	20% of total cover:	_____

Sampling Point: **DP-8**

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:

- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
- Problematic Hydrophytic Vegetation¹

(Explain)

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

Definitions of Five Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

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

Hydrophytic Vegetation Present? Yes X No _____

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		
0-8	10YR 4/2	80	7.5YR 4/6	20	C	PL	Fine sandy loam	
8-12	10YR 4/3	70	10YR 5/4	30	C	M	Fine sandy loam	

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 Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (Outside MLRA 150A, B)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)	
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20)	
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> (MLRA 153B)	
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)		
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)		
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)		
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplains Soils (F19) (MLRA 149A)		
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)		
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)			

Restrictive Layer (if observed):	Hydric Soil Present?		
Type: _____	Yes	X	No
Depth (inches): _____			

Remarks:

Based on soil profile, hydrology source appears to be surface water.

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WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Bureau of Engraving and Printing on BARC City/County: Greenbelt/PG Sampling Date: 4/3/20

Applicant/Owner: Bureau of Engraving and Printing State: MD Sampling Point: DP-9

Investigator(s): DRC/LJ/CO Section, Township, Range: _____

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

Subregion (LRR or MLRA): MLRA S/LRR149A Lat: 39° 01' 59.28" Long: 76° 52' 54.21" Datum: NAD 83

Soil Map Unit Name: Christiana-Downer Complex, 5-10% slopes NWI classification: UPL

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

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

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

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

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Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>								
Hydric Soil Present?	Yes _____	No <u>X</u>								
Wetland Hydrology Present?	Yes _____	No <u>X</u>								
<p>Remarks:</p> <p>Upland data point located between Wetlands 7 and 8</p>										

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (minimum of one is required; check all that apply)</u></p> <table style="width:100%;"> <tr> <td style="width:50%;"> <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 type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) </td> <td style="width:50%;"> <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along 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) </td> </tr> </table>	<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 type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along 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)	<p><u>Secondary Indicators (minimum of two required)</u></p> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U)
<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 type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along 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)		

<p>Field Observations:</p>			
Surface Water Present?	Yes _____	No <u>X</u>	Depth (inches): _____
Water Table Present?	Yes _____	No <u>X</u>	Depth (inches): _____
Saturation Present?			
(includes capillary fringe)	Yes _____	No <u>X</u>	Depth (inches): _____
			<p>Wetland Hydrology Present?</p> <p>Yes _____ No <u>X</u></p>
<p>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</p>			
<p>Remarks:</p> <p>No signs of hydrology.</p>			

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

Tree Stratum (Plot Size: 20-foot radius plot)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
		= Total Cover	
50% of total cover:	_____	20% of total cover:	_____

Sapling Stratum (Plot Size: 20-foot radius plot)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
		= Total Cover	
50% of total cover:	_____	20% of total cover:	_____

Shrub Stratum (Plot Size: 20-foot radius plot)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
		= Total Cover	
50% of total cover:	_____	20% of total cover:	_____

Herb Stratum (Plot Size: 10-foot radius plot)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Festuca pratensis</i>	70	Y	FACU
2. <i>Trifolium repens</i>	10	N	FACU
3. <i>Plantago lanceolata</i>	5	N	FACU
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
		= Total Cover	
50% of total cover:	42.5	20% of total cover:	17

Woody Vine Stratum (Plot Size: 20-foot radius plot)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
		= Total Cover	
50% of total cover:	_____	20% of total cover:	_____

Sampling Point: **DP-9**

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	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
- Problematic Hydrophytic Vegetation¹

(Explain)

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

Definitions of Five Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

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

Hydrophytic Vegetation Present? Yes X No _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (Inches)	Matrix		Redox Features				Remarks
	Color (Moist)	%	Color (Moist)	%	Type ¹	Loc ²	
0-12	10YR 3/4	60	5YR 4/6	20			Sandy loam Fill material
			10YR 7/2				Clay Fill material

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 Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (Outside MLRA 150A, B)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20)	
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> (MLRA 153B)	
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)		
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)		
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)		
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplains Soils (F19) (MLRA 149A)		
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)		
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)			

Restrictive Layer (if observed):	Hydric Soil Present?		
Type: _____	Yes	No	X
Depth (inches): _____			

Remarks:

Soil is comprised of mixed loam/clay with gravel from road fill.

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WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Bureau of Engraving and Printing on BARC City/County: Greenbelt/PG Sampling Date: 4/3/20

Applicant/Owner: Bureau of Engraving and Printing State: MD Sampling Point: DP-10

Investigator(s): DRC/LJ/CO Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Flat pasture Local relief (concave, convex, none): concave Slope (%): 5-8%

Subregion (LRR or MLRA): MLRA S/LRR 149A Lat: 39° 01' 58.37" Long: 76° 52' 55.73" Datum: NAD 83

Soil Map Unit Name: Christiana-Downer Complex, 5-10% slopes NWI classification: PEM

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

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

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

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: Wetland 8 Data point.	

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>
_____ Surface Water (A1) _____ High Water Table (A2) <u>X</u> Saturation (A3) _____ Water Marks (B1) _____ Sediment Deposits (B2) _____ Drift Deposits (B3) _____ Algal Mat or Crust (B4) _____ Iron Deposits (B5) _____ Inundation Visible on Aerial Imagery (B7) _____ Water-Stained Leaves (B9)	_____ Aquatic Fauna (B13) _____ Marl Deposits (B15) (LRR U) _____ Hydrogen Sulfide Odor (C1) <u>X</u> Oxidized Rhizospheres along Living Roots (C3) _____ Presence of Reduced Iron (C4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Thin Muck Surface (C7) _____ Other (Explain in Remarks)	_____ Surface Soil Cracks (B6) _____ Sparsely Vegetated Concave Surface (B8) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) <u>X</u> Saturation Visible on Aerial Imagery (C9) <u>X</u> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ FAC-Neutral Test (D5) _____ Sphagnum Moss (D8) (LRR T, U)

Field Observations:			
Surface Water Present?	Yes _____ No <u>X</u>	Depth (inches): _____	Wetland Hydrology Present? Yes <u>X</u> No _____
Water Table Present?	Yes _____ No <u>X</u>	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes <u>X</u> No _____	Depth (inches): <u>0"</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: Ground water flow in swale approximately 2' west of data point. Wetland 8 drains under Powder Mill road to WUS-6 then to WUS-4. Cypress knees present.			

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

Tree Stratum (Plot Size: 20-foot radius plot)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Diospyros virginiana</i>	5	Yes	FAC
2.	<i>Taxodium distichum</i>	8	Yes	OBL
3.				
4.				
5.				
6.				
		13	= Total Cover	
50% of total cover:		6.5	20% of total cover:	2.6

Sapling Stratum (Plot Size: 20-foot radius plot)

1.				
2.				
3.				
4.				
5.				
6.				
			= Total Cover	
50% of total cover:			20% of total cover:	

Shrub Stratum (Plot Size: 20-foot radius plot)

1.				
2.				
3.				
4.				
5.				
6.				
			= Total Cover	
50% of total cover:			20% of total cover:	

Herb Stratum (Plot Size: 10-foot radius plot)

1.	<i>Typha latifolia</i>	80	Y	OBL
2.	<i>Juncus effuses</i>	10	N	OBL
3.	<i>Lythrum salicaria</i>	5	N	OBL
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		95	= Total Cover	
50% of total cover:		47.5	20% of total cover:	19

Woody Vine Stratum (Plot Size: 20-foot radius plot)

1.				
2.				
3.				
			= Total Cover	
50% of total cover:			20% of total cover:	

Sampling Point: **DP-10**

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
- Problematic Hydrophytic Vegetation¹

(Explain)

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

Definitions of Five Vegetation Strata:

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

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

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

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

Woody vine - All woody vines, regardless of height.

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

Hydrophytic Vegetation Present? Yes X No

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		
0-8	10 YR 4/2	70	10YR 4/3	30	C	PL	Sandy loam	

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 Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (Outside MLRA 150A, B)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)	
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20)	
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> (MLRA 153B)	
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)		
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)		
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)		
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplains Soils (F19) (MLRA 149A)		
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)		
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)			

Restrictive Layer (if observed):	Hydric Soil Present?		
Type: _____	Yes	X	No _____
Depth (inches): _____			

Remarks:

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ENCLOSURE 4:
Specimen Tree List

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BEP Specimen Trees

#	Scientific Name	Common Name	DBH	Condition
ST1	<i>Quercus alba</i>	White Oak	39.9	Very Good
ST2	<i>Quercus alba</i>	White Oak	32	Very Good
ST3	<i>Quercus alba</i>	White Oak	33	Good
ST4	<i>Quercus alba</i>	White Oak	34.5	Very Good
ST5	<i>Quercus alba</i>	White Oak	54	Good
ST6	<i>Quercus alba</i>	White Oak	35	Very Good
ST7	<i>Quercus alba</i>	White Oak	33	Good
ST8	<i>Quercus alba</i>	White Oak	36	Very Good
ST9	<i>Quercus alba</i>	White Oak	42	Very Good
ST10	<i>Liquidambar styraciflua</i>	Sweet Gum	34	Very Good
ST11	<i>Quercus alba</i>	White Oak	37	Very Good
ST12	<i>Liquidambar styraciflua</i>	Sweet Gum	34	Fair
ST13	<i>Acer rubrum</i>	Red Maple	36	Fair
ST14	<i>Quercus alba</i>	White Oak	40.5	Fair
ST15	<i>Quercus alba</i>	White Oak	32	Good
ST16	<i>Quercus alba</i>	White Oak	35	Good
ST17	<i>Quercus alba</i>	White Oak	43	Good
ST18	<i>Quercus alba</i>	White Oak	55	Fair
ST19	<i>Quercus alba</i>	White Oak	53	Fair
ST20	<i>Quercus palustris</i>	Pin Oak	37	Poor
ST21	<i>Quercus phellos</i>	Willow Oak	58	Fair
ST22	<i>Quercus phellos</i>	Willow Oak	35.75	Fair
ST23	<i>Quercus phellos</i>	Willow Oak	52	Poor
ST24	<i>Quercus alba</i>	White Oak	53	Very Good
ST25	<i>Quercus alba</i>	White Oak	48	Poor
ST26	<i>Quercus alba</i>	White Oak	45	Poor
ST27	<i>Quercus alba</i>	White Oak	34	Good
ST28	<i>Quercus alba</i>	White Oak	37	Good
ST29	<i>Quercus alba</i>	White Oak	33	Good
ST30	<i>Quercus alba</i>	White Oak	37	Good
ST31	<i>Quercus alba</i>	White Oak	46	Good
ST32	<i>Quercus alba</i>	White Oak	33.5	Good
ST33	<i>Quercus alba</i>	White Oak	37	Poor
ST34	<i>Quercus alba</i>	White Oak	33	Good
ST35	<i>Quercus alba</i>	White Oak	36	Good
ST36	<i>Liquidambar styraciflua</i>	Sweet Gum	33	Fair
ST37	<i>Quercus alba</i>	White Oak	48	Fair
ST38	<i>Liquidambar styraciflua</i>	Sweet Gum	34	Poor
ST39	<i>Quercus alba</i>	White Oak	40	Fair
ST40	<i>Quercus alba</i>	White Oak	45	Good
ST41	<i>Quercus alba</i>	White Oak	43	Fair
ST42	<i>Quercus alba</i>	White Oak	45	Poor
ST43	<i>Quercus alba</i>	White Oak	51	Good
ST44	<i>Quercus alba</i>	White Oak	41	Good
ST45	<i>Quercus alba</i>	White Oak	33	Good

ST46	<i>Quercus alba</i>	White Oak	48	Fair
ST47	<i>Quercus alba</i>	White Oak	46	Fair
ST48	<i>Quercus alba</i>	White Oak	44	Good
ST49	<i>Quercus alba</i>	White Oak	38.5	Good
ST50	<i>Quercus alba</i>	White Oak	51	Poor
ST51	<i>Quercus alba</i>	White Oak	40	Good
ST52	<i>Quercus alba</i>	White Oak	37.5	Good
ST53	<i>Liquidambar styraciflua</i>	Sweet Gum	30.5	Fair
ST54	<i>Quercus alba</i>	White Oak	37	Poor
ST55	<i>Quercus alba</i>	White Oak	37	Good
ST56	<i>Quercus alba</i>	White Oak	39	Fair
ST57	<i>Quercus alba</i>	White Oak	40	Good
ST58	<i>Quercus alba</i>	White Oak	34	Good
ST59	<i>Quercus alba</i>	White Oak	37.5	Good
ST60	<i>Liquidambar styraciflua</i>	Sweet Gum	30	Poor
ST61	<i>Liquidambar styraciflua</i>	Sweet Gum	33	Good
ST62	<i>Quercus stellata</i>	Post Oak	35	Good
ST63	<i>Quercus alba</i>	White Oak	33.5	Poor
ST64	<i>Quercus stellata</i>	Post Oak	31	Fair
ST65	<i>Quercus alba</i>	White Oak	35	Good
ST66	<i>Acer rubrum</i>	Red Maple	40.5	Very Poor
ST67	<i>Quercus alba</i>	White Oak	38	Good
ST68	<i>Liquidambar styraciflua</i>	Sweet Gum	38	Good
ST69	<i>Liquidambar styraciflua</i>	Sweet Gum	31	Fair
ST70	<i>Liquidambar styraciflua</i>	Sweet Gum	30.5	Good
ST71	<i>Liquidambar styraciflua</i>	Sweet Gum	33	Good
ST72	<i>Liquidambar styraciflua</i>	Sweet Gum	34	Good
ST73	<i>Liquidambar styraciflua</i>	Sweet Gum	33	Fair
ST74	<i>Liquidambar styraciflua</i>	Sweet Gum	31	Fair
ST75	<i>Liquidambar styraciflua</i>	Sweet Gum	31	Fair
ST76	<i>Liquidambar styraciflua</i>	Sweet Gum	35	Very Poor
ST77	<i>Liquidambar styraciflua</i>	Sweet Gum	36	Very Poor
ST78	<i>Liquidambar styraciflua</i>	Sweet Gum	44	Fair
ST79	<i>Liquidambar styraciflua</i>	Sweet Gum	37	Good
ST80	<i>Liquidambar styraciflua</i>	Sweet Gum	36	Poor
ST81	<i>Liquidambar styraciflua</i>	Sweet Gum	31	Very Poor
ST82	<i>Liquidambar styraciflua</i>	Sweet Gum	30.5	Fair
ST83	<i>Liquidambar styraciflua</i>	Sweet Gum	31	Fair
ST84	<i>Nyssa sylvatica</i>	Black Gum	30	Poor
ST85	<i>Liquidambar styraciflua</i>	Sweet Gum	34	Fair
ST86	<i>Liquidambar styraciflua</i>	Sweet Gum	30	Good
ST87	<i>Liquidambar styraciflua</i>	Sweet Gum	46	Very Good
ST88	<i>Liquidambar styraciflua</i>	Sweet Gum	30	Fair
ST89	<i>Liquidambar styraciflua</i>	Sweet Gum	32	Fair
ST90	<i>Nyssa sylvatica</i>	Black Gum	33.5	Poor
ST91	<i>Quercus palustris</i>	Pin Oak	60	Good
ST92	<i>Quercus alba</i>	White Oak	45	Fair

ST93	<i>Liquidambar styraciflua</i>	Sweet Gum	31	Fair
ST94	<i>Liquidambar styraciflua</i>	Sweet Gum	35	Fair
ST95	<i>Liquidambar styraciflua</i>	Sweet Gum	34	Fair
ST96	<i>Liquidambar styraciflua</i>	Sweet Gum	30	Good
ST97	<i>Liquidambar styraciflua</i>	Sweet Gum	33	Very Poor
ST98	<i>Liquidambar styraciflua</i>	Sweet Gum	31	Fair
ST99	<i>Liquidambar styraciflua</i>	Sweet Gum	34	Fair
ST100	<i>Quercus palustris</i>	Pin Oak	42	Good
ST101	<i>Liquidambar styraciflua</i>	Sweet Gum	31	Poor
ST102	<i>Liquidambar styraciflua</i>	Sweet Gum	35	Poor
ST103	<i>Liquidambar styraciflua</i>	Sweet Gum	32	Very Poor
ST104	<i>Quercus bicolor</i>	Swamp White Oak	35	Good
ST105	<i>Acer rubrum</i>	Red Maple	33	Fair
ST106	<i>Quercus alba</i>	White Oak	35	Good
ST107	<i>Quercus phellos</i>	Willow Oak	37	Very Good
ST108	<i>Quercus alba</i>	White Oak	37	Very Good
ST109	<i>Quercus alba</i>	White Oak	36	Poor
ST110	<i>Quercus alba</i>	White Oak	35	Good
ST111	<i>Quercus alba</i>	White Oak	34	Poor
ST112	<i>Quercus alba</i>	White Oak	34	Good
ST113	<i>Quercus alba</i>	White Oak	35	Good
ST114	<i>Quercus alba</i>	White Oak	33	Good
ST115	<i>Quercus alba</i>	White Oak	42	Poor
ST116	<i>Liquidambar styraciflua</i>	Sweet Gum	30	Good
ST117	<i>Carya glabra</i>	Pignut Hickory	30	Good
ST118	<i>Quercus phellos</i>	Willow Oak	49	Very Good
ST119	<i>Carya glabra</i>	Shagbark Hickory	33	Good
ST120	<i>Quercus alba</i>	White Oak	33	Poor
ST121	<i>Quercus alba</i>	White Oak	39	Fair
ST122	<i>Quercus alba</i>	White Oak	36	Good
ST123	<i>Acer rubrum</i>	Red Maple	35	Good
ST124	<i>Liquidambar styraciflua</i>	Sweet Gum	37	Fair
ST125	<i>Quercus stellata</i>	Post Oak	35	Fair
ST126	<i>Quercus palustris</i>	Pin Oak	38	Poor
ST127	<i>Quercus alba</i>	White Oak	36	Good
ST128	<i>Quercus alba</i>	White Oak	42	Good
ST129	<i>Quercus alba</i>	White Oak	33	Good
ST130	<i>Quercus alba</i>	White Oak	33	Good
ST131	<i>Quercus alba</i>	White Oak	33	Good
ST132	<i>Quercus alba</i>	White Oak	35	Fair
ST133	<i>Quercus alba</i>	White Oak	41	Good
ST134	<i>Liquidambar styraciflua</i>	Sweet Gum	33	Good
ST135	<i>Quercus alba</i>	White Oak	40	Good
ST136	<i>Quercus alba</i>	White Oak	45	Fair
ST137	<i>Quercus alba</i>	White Oak	46	Good
ST138	<i>Quercus alba</i>	White Oak	43	Good
ST139	<i>Liquidambar styraciflua</i>	Sweet Gum	31	Good

ST140	<i>Liquidambar styraciflua</i>	Sweet Gum	32	Fair
ST141	<i>Quercus alba</i>	White Oak	41	Poor
ST142	<i>Quercus alba</i>	White Oak	33	Fair
ST143	<i>Quercus alba</i>	White Oak	35	Good
ST144	<i>Quercus alba</i>	White Oak	33	Good
ST145	<i>Quercus palustris</i>	Pin Oak	38	Good
ST146	<i>Quercus alba</i>	White Oak	38.5	Good
ST147	<i>Liquidambar styraciflua</i>	Sweet Gum	45	Fair
ST148	<i>Quercus alba</i>	White Oak	36	Good
ST149	<i>Quercus alba</i>	White Oak	44	Good
ST150	<i>Quercus alba</i>	White Oak	53	Good
ST151	<i>Quercus alba</i>	White Oak	34	Good
ST152	<i>Quercus alba</i>	White Oak	46	Good
ST153	<i>Quercus alba</i>	White Oak	45	Good
ST154	<i>Quercus alba</i>	White Oak	48	Good
ST155	<i>Quercus alba</i>	White Oak	46	Good
ST156	<i>Quercus alba</i>	White Oak	38	Poor
ST157	<i>Quercus palustris</i>	Pin Oak	52	Fair
ST158	<i>Quercus alba</i>	White Oak	39	Good
ST159	<i>Acer rubrum</i>	Red Maple	36	Good
ST160	<i>Quercus alba</i>	White Oak	35	Very Good
ST161	<i>Quercus stellata</i>	Post Oak	31	Good
ST162	<i>Quercus velutina</i>	Black Oak	31	Poor
ST163	<i>Quercus prinus</i>	Chestnut Oak	36	Poor
ST164	<i>Quercus alba</i>	White Oak	58	Good
ST165	<i>Acer rubrum</i>	Red Maple	50	Good
ST166	<i>Quercus alba</i>	White Oak	36	Good
ST167	<i>Quercus alba</i>	White Oak	33	Good
ST168	<i>Quercus alba</i>	White Oak	31	Good
ST169	<i>Liquidambar styraciflua</i>	Sweet Gum	32	Good
ST170	<i>Quercus alba</i>	White Oak	30	Good
ST171	<i>Quercus alba</i>	White Oak	36	Good
ST172	<i>Quercus cocinea</i>	Scarlett Oak	41	Fair
ST173	<i>Quercus alba</i>	White Oak	31	Good
ST174	<i>Quercus alba</i>	White Oak	47	Very Poor
ST175	<i>Quercus alba</i>	White Oak	40	Good
ST176	<i>Quercus alba</i>	White Oak	31	Good
ST177	<i>Quercus alba</i>	White Oak	34	Poor
ST178	<i>Quercus alba</i>	White Oak	34	Good
ST179	<i>Quercus alba</i>	White Oak	32	Good
ST180	<i>Quercus alba</i>	White Oak	33	Poor
ST181	<i>Quercus alba</i>	White Oak	31	Good
ST182	<i>Quercus alba</i>	White Oak	31	Good
ST183	<i>Quercus alba</i>	White Oak	32	Good
ST184	<i>Quercus alba</i>	White Oak	36	Good
ST185	<i>Quercus alba</i>	White Oak	33	Good
ST186	<i>Quercus alba</i>	White Oak	33	Good

ST187	<i>Liriodendron tulipifera</i>	Tulip poplar	38	Poor
ST188	<i>Liquidambar styraciflua</i>	Sweet Gum	30	Fair
ST189	<i>Acer rubrum</i>	Red Maple	40	Fair
ST190	<i>Liquidambar styraciflua</i>	Sweet Gum	35	Poor
ST191	<i>Liquidambar styraciflua</i>	Sweet Gum	38	Good
ST192	<i>Liquidambar styraciflua</i>	Sweet Gum	35	Good
ST193	<i>Liquidambar styraciflua</i>	Sweet Gum	35	Fair
ST194	<i>Quercus palustris</i>	Pin Oak	34	Fair
ST195	<i>Liquidambar styraciflua</i>	Sweet Gum	33	Fair
ST196	<i>Liquidambar styraciflua</i>	Sweet Gum	35	Good
ST197	<i>Liquidambar styraciflua</i>	Sweet Gum	37	Good
ST198	<i>Liquidambar styraciflua</i>	Sweet Gum	31	Good/Fair
ST199	<i>Quercus alba</i>	White Oak	34.5	Fair
ST200	<i>Liquidambar styraciflua</i>	Sweet Gum	31	Good
ST201	<i>Liquidambar styraciflua</i>	Sweet Gum	33	Good
ST202	<i>Liquidambar styraciflua</i>	Sweet Gum	31	Good
ST203	<i>Liquidambar styraciflua</i>	Sweet Gum	32	Good
ST204	<i>Liquidambar styraciflua</i>	Sweet Gum	52	Poor
ST205	<i>Liquidambar styraciflua</i>	Sweet Gum	35	Good
ST206	<i>Liquidambar styraciflua</i>	Sweet Gum	36.5	Good
ST207	<i>Liquidambar styraciflua</i>	Sweet Gum	39	Good
ST208	<i>Morus rubra</i>	Red Mulberry	35	Fair

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