

June 6, 2025

James E. Craig Jr.
Otterdam Technology Group, LLC
440 Monticello Ave., Suite 2200
Norfolk, Virginia 23510

Via e-mail: jamie@beechtree.biz

Re: Waters of the U.S. and States Waters Delineation

SRF Franklin – Kistler Tract (± 503.3 acres)

Greensville County, Virginia

WSSI #35772.01

Dear Mr. Craig:

Wetland Studies and Solutions, Inc. (WSSI) has completed a Waters of the U.S. (WOTUS) and State Waters delineation of the +/- 503.3-acre SRF Franklin – Kistler Tract site in Greensville County, Virginia and includes all or portions of parcels 11-24, 11-24A, and 11-25, herein referred to collectively as the "Project Area". Note that the size of this Project Area reflects a reduction from the originally authorized size of +/- 752.2 acres, as requested by the Client during the field work phase. In WSSI's opinion, wetlands are present throughout the Project Area, based on our observations as described below. Background mapping; GPS located boundaries of jurisdictional WOTUS, State Waters, and wetlands and approximate location of associated data points; data forms; photos; and stream assessment form are attached per the following:

- Figures 1-6: Background Mapping
- Figures 7A-7E: WOTUS and State Waters Delineation Map
- <u>Attachment 1</u>: Routine Wetland Determination Data Forms and Photographs
- Attachment 2: North Carolina DWQ Stream Identification Forms and Photographs
- Attachment 3: ERDC Antecedent Precipitation Tool Data

The Site is generally located south of Allen Road and west of Otterdam Road near the town of Jarratt and west of Interstate 95 in Greensville County, Virginia. The Site is located within the Nottoway watershed (HUC 03010201) which ultimately drains to the Albemarle Sound to the south.

Delineation field work was performed by Nikolai Karlov, PWD, VSWD, Kyle Zinn, WPIT, Lindsey Shortt, WPIT, Jackson Livingstone, WPIT, Jillian Burgan, WPIT, and Julia Coan between April 22 and May 8, 2025. In WSSI's opinion, WOTUS and State Waters are located within the Site. A summary of findings is provided below, which summarizes the acreage and Cowardin classification of each WOTUS or State Water identified within the Site.

#### **Aquatic Resources**

• Approximately 18.95 acres of palustrine emergent (PEM) wetlands.

1008 Old Virginia Beach Road • Suite 200 • Virginia Beach, VA 23451 • Phone 757-963-2008 www.wetlands.com

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- Approximately 7.67 acres of palustrine scrub-shrub wetlands (PSS).
- Approximately 69.29 acres of palustrine forested wetlands (PFO).
- Approximately 0.02 acres of isolated palustrine shrub wetlands (PSS).
- Approximately 12,489 linear feet of perennial stream (R3).
- Approximately 3,167 linear feet of intermittent stream (R4).
- Approximately 2,077 linear feet of ephemeral stream (R6).

#### **Limitations**

This study is based on examination of vegetation, soils and hydrology onsite and available reference documents. Field indicators can change with variations in hydrology and other factors. Additionally, a large portion of the Site was observed to have been recently cleared of vegetation because of silviculture activities, which can also have a significant impact on soil and hydrological conditions. Based on the Manual<sup>1</sup>, these areas are considered "atypical". This report assessed the potential for wetlands at the site at the time of our review and does not address potential conditions at a given time in the future. Our conclusions may vary significantly from future observations by others.

Our review and report have been prepared in accordance with generally accepted guidelines for the conduct of a survey for potential wetlands. The conclusions presented herein are based upon our review of available information, the results of our field studies, and/or professional judgement. We make no other warranties, either expressed or implied, and our report is not a recommendation to buy, sell or develop the property.

We offer no opinion and do not purport to opine on the possible application of various building codes, zoning ordinances, other land use or platting regulations, environmental or health laws and other similar statutes, laws, ordinances, code and regulations affecting the possible use and occupancy of the Property for the purpose for which it is being used, except as specifically provided above.

The foregoing opinions are based on applicable laws, ordinances, and regulations in effect as of the date hereof and should not be construed to be an opinion as to the matters set out herein should such laws, ordinances or regulations be modified, repealed or amended.

Any reuse or modification of any of this document (whether hard copies or electronic transmittals) prepared by WSSI without written verification or adaptation by WSSI will be at the sole risk of the individual or entity utilizing said document and such use is without the authorization of WSSI. WSSI shall have no legal liability resulting from any and all claims, damages, losses, and expenses, including attorney's fees arising out of the unauthorized reuse or modification of this document. Client shall indemnify WSSI from any claims arising out of unauthorized use or modification of the document whether hard copy or electronic.

<sup>&</sup>lt;sup>1</sup> Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1 (1987 Manual) and subsequent guidance.

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This report does not constitute a jurisdictional determination of waters of the U.S. since such determinations must be verified by the U.S. Army Corps of Engineers or the Natural Resources Conservation Service (as applicable) and are subject to review by the U.S. Environmental Protection Agency. This report does not constitute a stream characterization determination.

Sincerely,

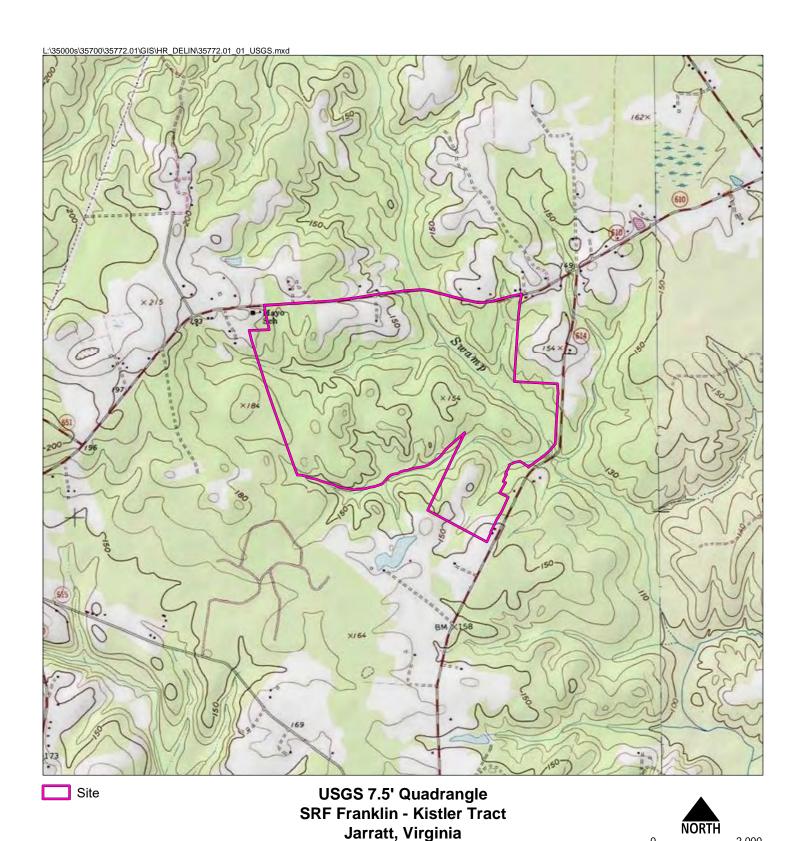
WETLAND STUDIES AND SOLUTIONS, INC.

Nikolai Karlov, PWD, VSWD

Project Environmental Scientist Scientist Manager – Environmental Services

mark PMEerry

Mark McElroy, SPWS, PWD



WSSI #35772.01

Purdy, VA 1990 Latitude: 36°47'50"N

Longitude: 77°31'24"W

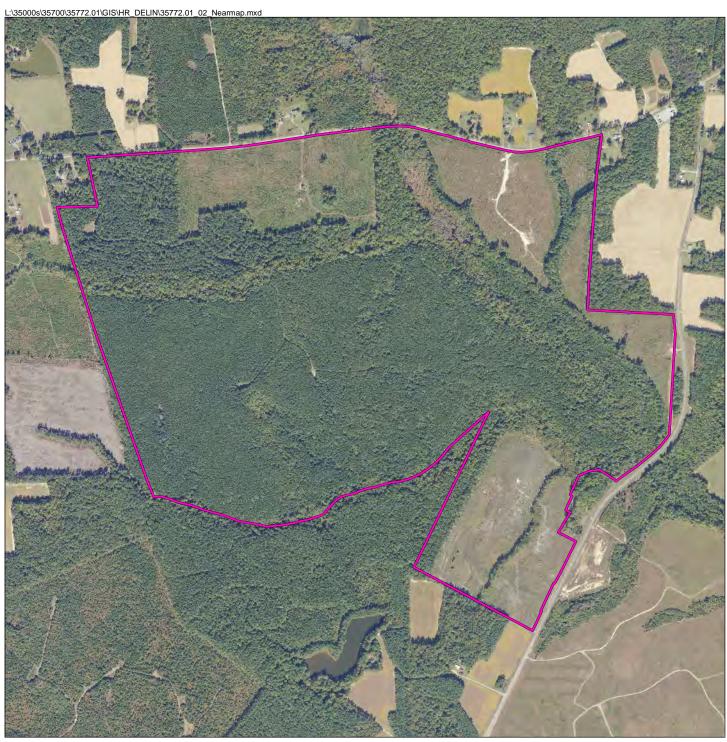
Hydrologic Unit Code (HUC): 030102011001; 030102011003

HUC12 Name: Slagles Lake-Three Creek; Otterdam Swamp-Three Creek COE Region: Atlantic and Gulf Coastal Plain

# Wetland Studies and Solutions, Inc.

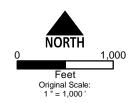
2,000

Original Scale: 1 " = 2,000 '

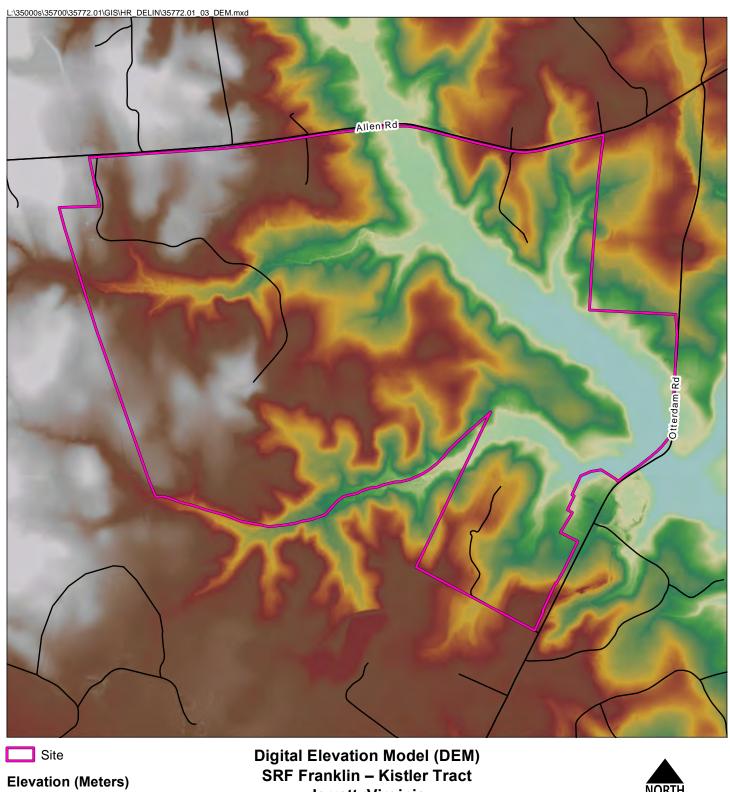


Site

Summer 2023 Natural Color Imagery SRF Franklin - Kistler Tract Jarratt, Virginia WSSI #35772.01



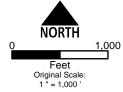
Source: National Agriculture Imagery Program (NAIP)



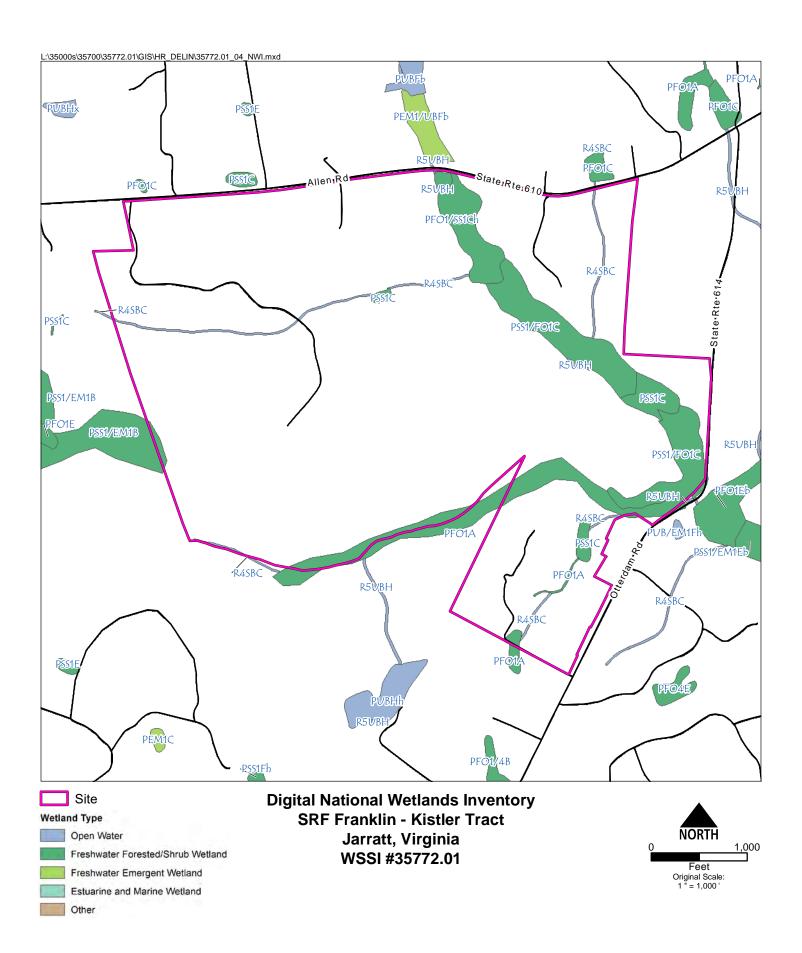
Low: 32.9078

High: 59.6895

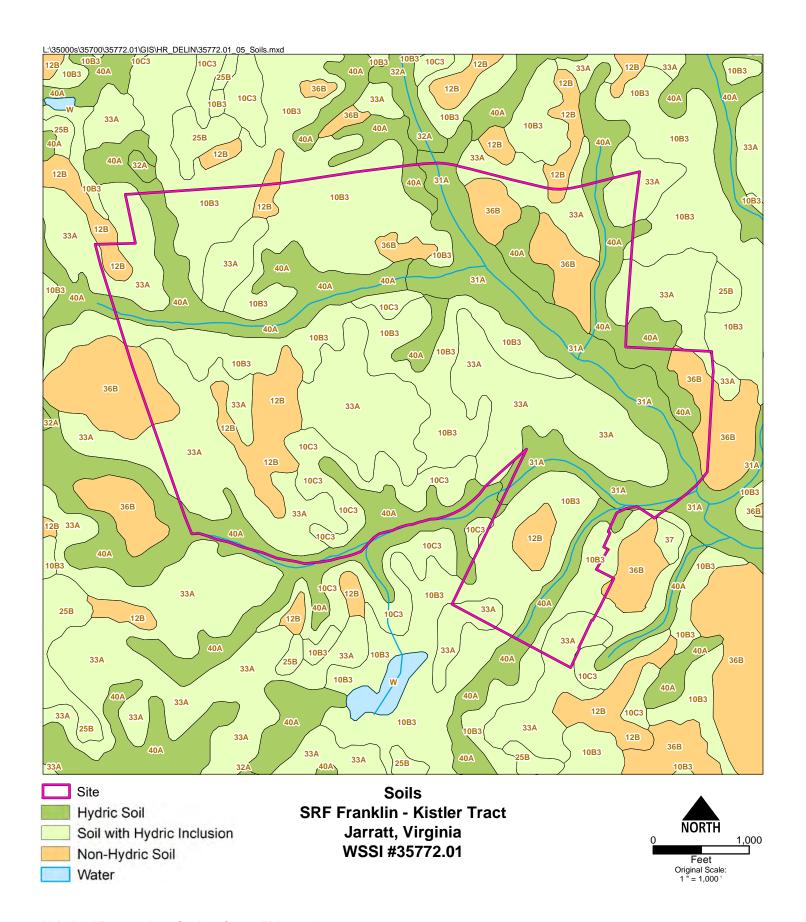
Jarratt, Virginia WSSI #35772.01



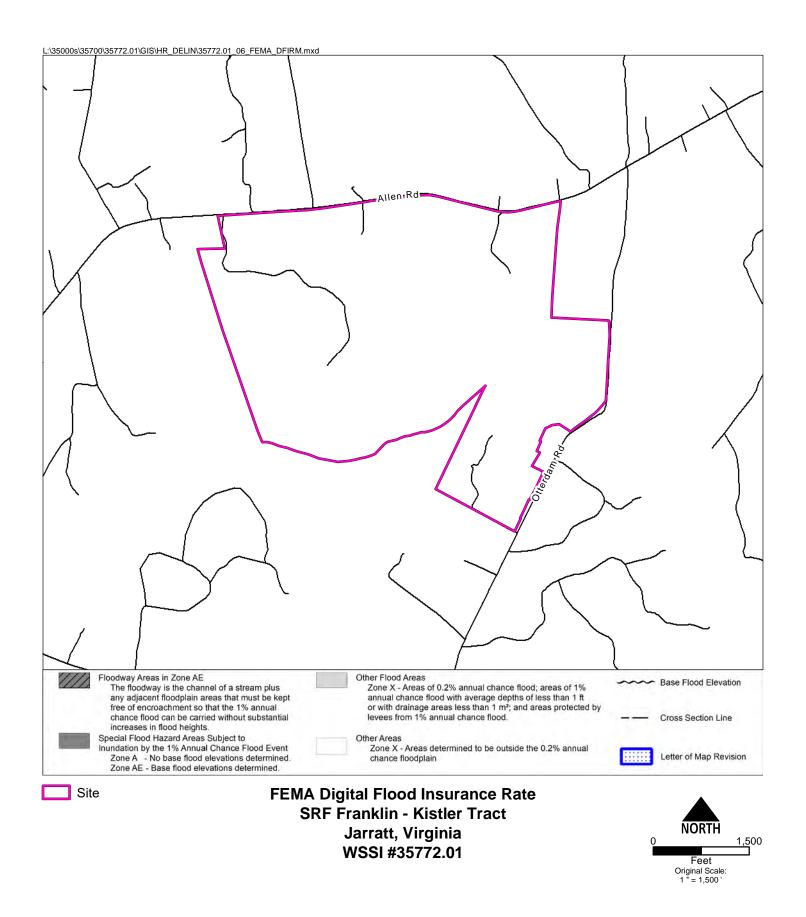
Source: USGS 3DEP Elevation Program



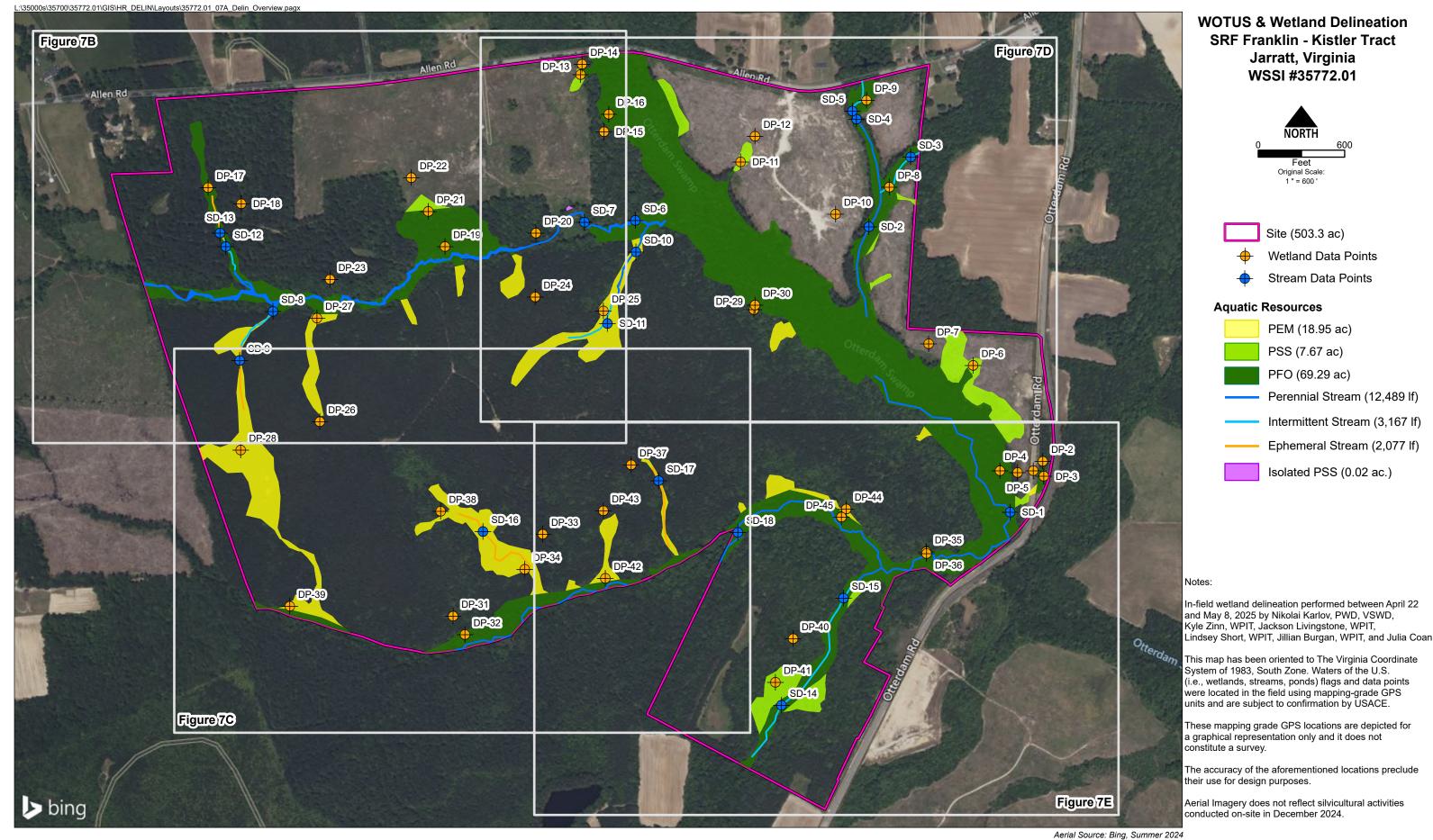
Source: U.S. Fish and Wildlife Service; October 2024



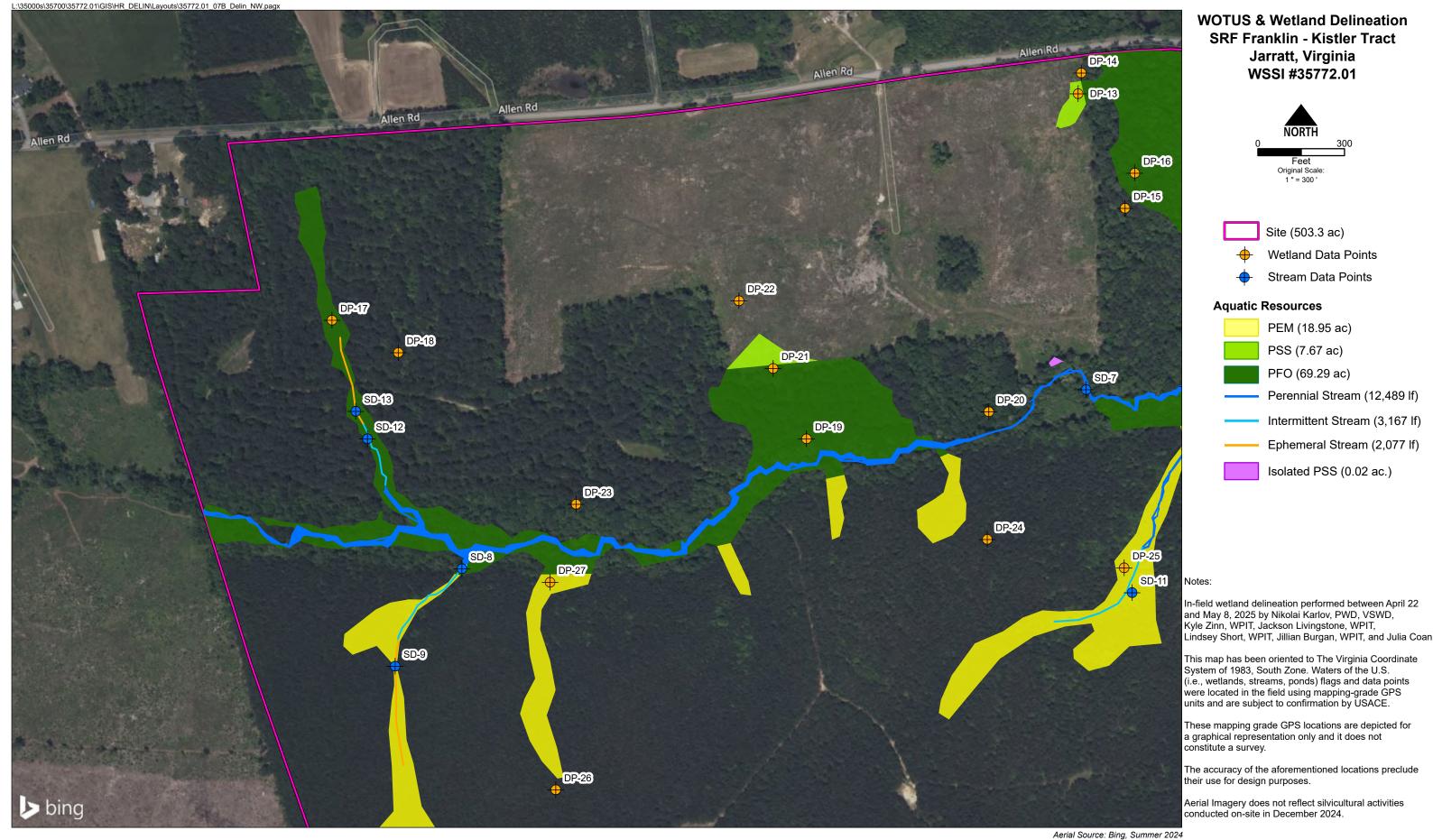
Major Land Resource Area: Southern Coastal Plain, 133A Land Resource Region: South Atlantic and Gulf Slope Cash Crops, Forest, and Livestock Region, P Source: Greensville County Digital Data, U.S. Department of Agriculture, 2024



Panel: 51081C0100C, Effective: 07/07/2009



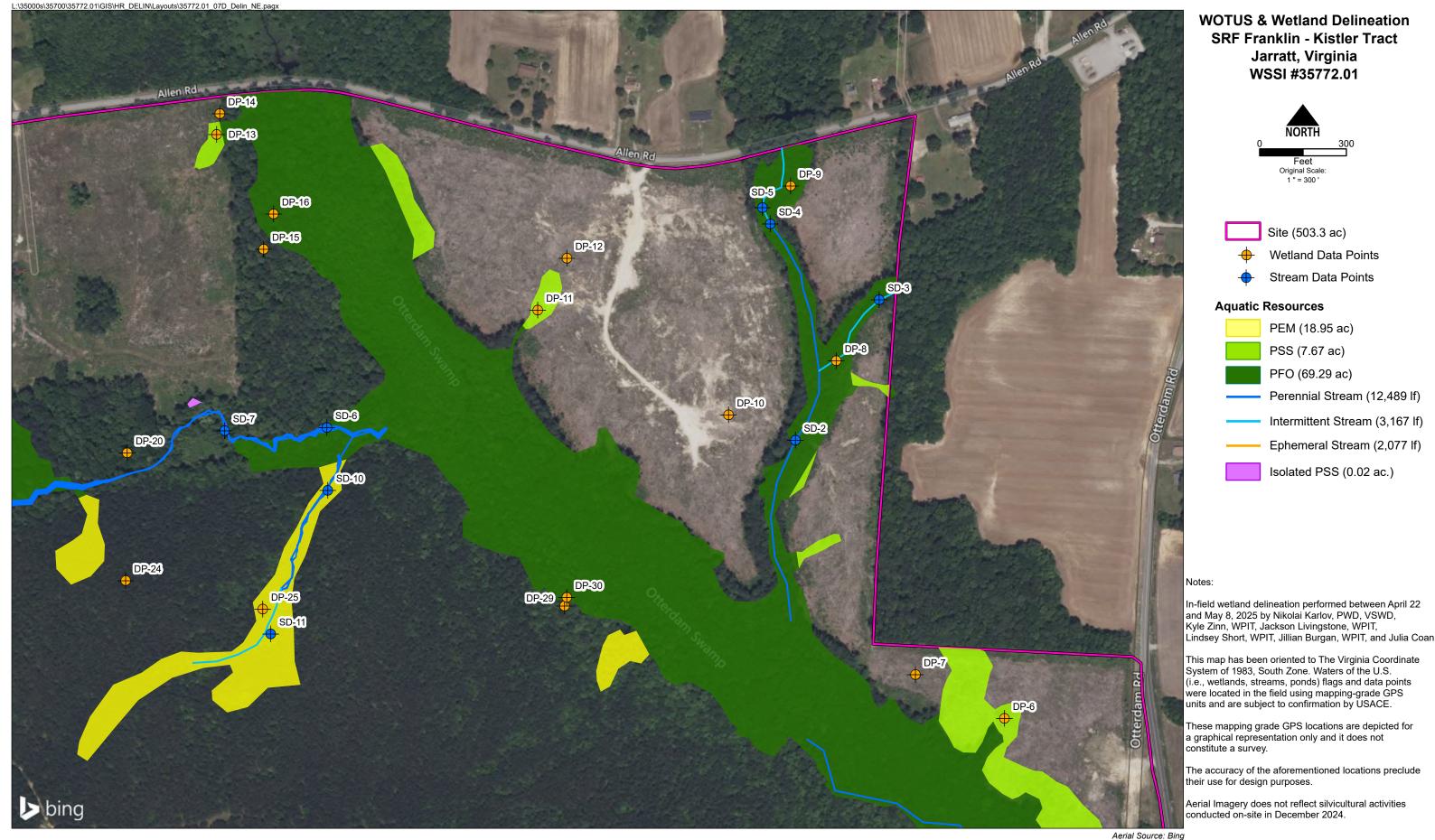
Wetland Studies and Solutions, Inc. a **DAVEY** company



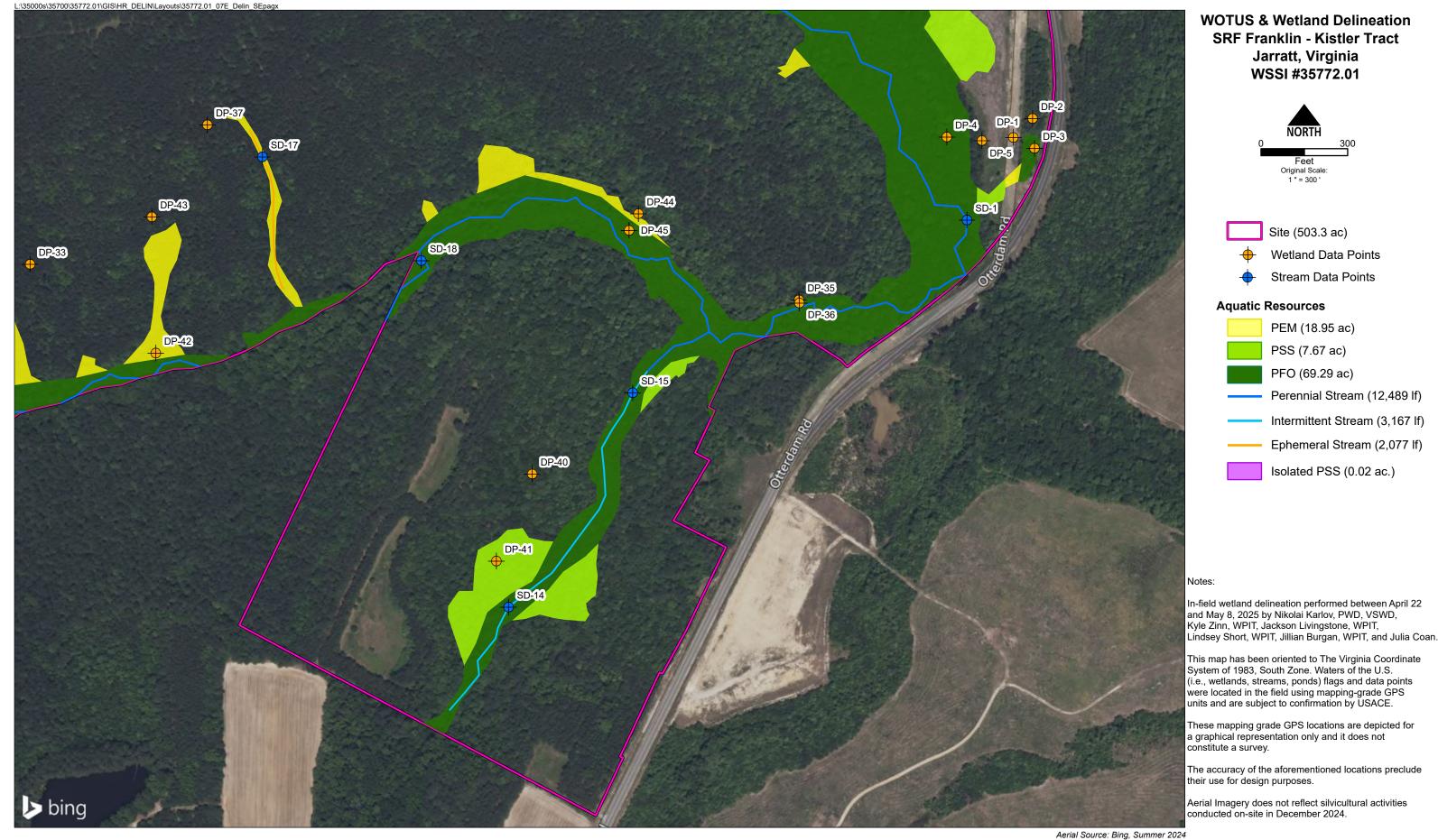
Wetland Studies and Solutions, Inc.



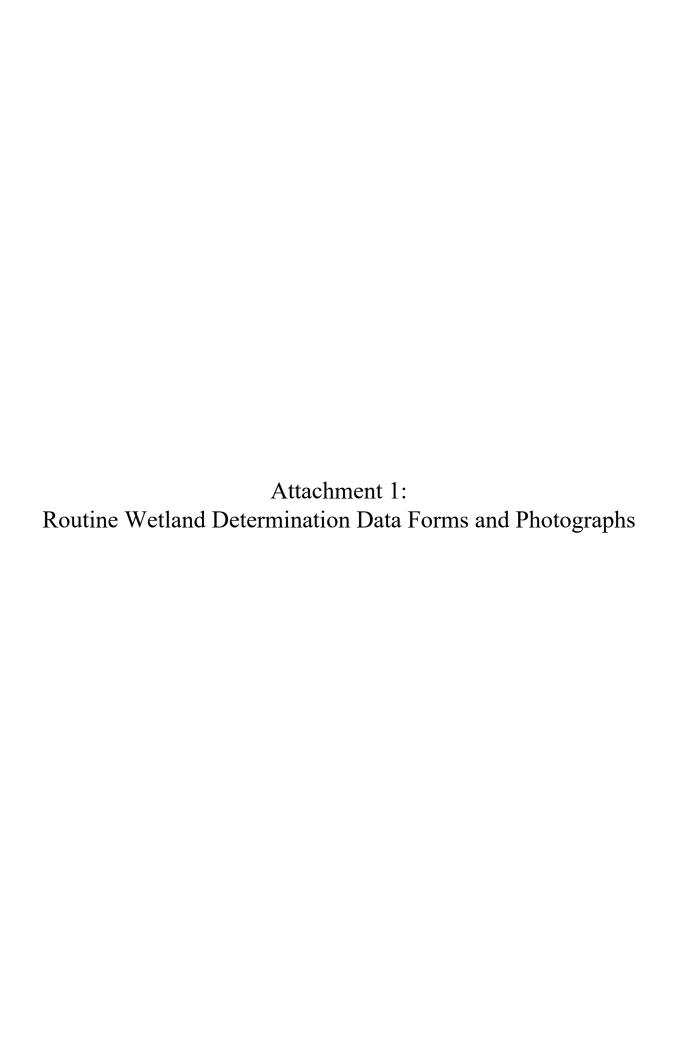
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Wetland Studies and Solutions, Inc. a **DAVEY** company



## **U.S.** Army Corps of Engineers

## WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: SRF Franklin - Kistler T	ract	City/County: Greens	ville County	Sampling Date: 2025-04-22		
Applicant/Owner: Otterdam Techno				Sampling Point: DP-1		
Investigator(s): Nikolai Karlov, Jackson Livingst	tone, Jillian Burgan, WSSI Se	ction, Township, Range:				
Landform (hillside, terrace, etc.): Hillslope	Local	relief (concave, convex,	none): None	Slope (%): <b>4</b>		
Subregion (LRR or MLRA): P 133A				Datum: NAD 83		
Soil Map Unit Name: 36B - Uchee Ioan			NWI classification			
Are climatic / hydrologic conditions on the site	typical for this time of year?	Yes	No (If no, ex	rplain in Remarks.)		
Are Vegetation, Soil, or Hydrold	ogysignificantly distu	rbed? Are "Normal C	Circumstances" present?	Yes 🗸 No		
Are Vegetation, Soil, or Hydrold	ogynaturally problem	natic? (If needed, exp	plain any answers in Rer	marks.)		
SUMMARY OF FINDINGS – Attach	site map showing sa	mpling point location	ons, transects, imp	portant features, etc.		
Hydrophytic Vegetation Present?	Yes No	Is the Sampled Area				
Hydric Soil Present?	Yes No V	within a Wetland?	Yes	No 🗸		
	Yes No 🗸					
Premarks: Data point sampled in an uple regularly maintained. Condit				appears to be		
HYDROLOGY						
Wetland Hydrology Indicators:				minimum of two required)		
Primary Indicators (minimum of one is require			Surface Soil Cracks			
Surface Water (A1)	Aquatic Fauna (B13)	· · ·	Sparsely Vegetated Concave Surface (B8)			
High Water Table (A2)	Marl Deposits (B15) (LF	•	Drainage Patterns (B10)			
Saturation (A3)	Hydrogen Sulfide Odor		Moss Trim Lines (B16) Dry-Season Water Table (C2)			
Water Marks (B1)	Oxidized Rhizospheres	= : :				
Sediment Deposits (B2)	Presence of Reduced In	` '	Crayfish Burrows (0			
Drift Deposits (B3)	Recent Iron Reduction i			on Aerial Imagery (C9)		
Algal Mat or Crust (B4)	Thin Muck Surface (C7)		Geomorphic Position (D2)			
Iron Deposits (B5)	Other (Explain in Rema	irks)	Shallow Aquitard (I			
Inundation Visible on Aerial Imagery (B7)	1		FAC-Neutral Test (			
Water-Stained Leaves (B9)			Sphagnum Moss (I	)8) <b>(LKK 1, U)</b>		
Field Observations: Surface Water Present? Yes	No. V Donth (inches)					
	No Depth (inches)					
	No Depth (inches)		Uluduala es a Dua a esta	Vaa Na 4/		
Saturation Present? Yes	No Pepth (inches)	wetiand	Hydrology Present?	Yes No		
(includes capillary fringe)  Describe Recorded Data (stream gauge, mor	oitoring well porial photos r	provious inspections) if a	vailable:			
Describe Recorded Data (stream gauge, mor	illoring well, aerial priolos, p	revious inspections), ii a	valiable.			
Remarks:		-				
No water table or saturation	observed within 2	24 inches from	the ground surf	ace.		

 VEGETATION (Five Strata)
 – Use scientific names of plants.
 Sampling Point:
 DP-1

Tree Stratum (Plot size: 30 ft r )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
3.				Total Number of Dominant
4.				Species Across All Strata: 4 (B)
5.				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 25.00 (A/B)
		=Total Cover		Prevalence Index worksheet:
50% of total cover:	20%	of total cover	:	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 30 ft r )				OBL species <u>5</u> x 1 = <u>5</u>
1				FACW species $0   x 2 = 0$
2				FAC species 24 x 3 = 72
3				FACU species <u>55</u> x 4 = <u>220</u>
4				UPL species <u>0</u>
5				Column Totals: <u>84</u> (A) <u>297</u> (B)
6				Prevalence Index = B/A = 3.53
		=Total Cover		Hydrophytic Vegetation Indicators:
50% of total cover:	20%	of total cover	:	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30 ft r )				2 - Dominance Test is >50%
1				3 - Prevalence Index is ≤3.0 <sup>1</sup>
2				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3				
4				
5				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be
6				present, unless disturbed or problematic.
	:	=Total Cover		Definitions of Five Vegetation Strata:
				_
50% of total cover:	20%	of total cover	:	Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 30 ft r )	20%	of total cover	:	<b>Tree</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
Herb Stratum (Plot size: 30 ft r  1. Andropogon virginicus	18		FAC	Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 30 ft r )  1. Andropogon virginicus 2. Anthoxanthum odoratum	18 15		FAC FACU	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,
Herb Stratum (Plot size: 30 ft r )  1. Andropogon virginicus  2. Anthoxanthum odoratum  3. Trifolium dubium	18 15 10		FACU FACU	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
Herb Stratum (Plot size: 30 ft r )  1. Andropogon virginicus  2. Anthoxanthum odoratum  3. Trifolium dubium  4. Poa annua	18 15 10 8		FACU FACU FACU	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.
Herb Stratum (Plot size: 30 ft r )  1. Andropogon virginicus  2. Anthoxanthum odoratum  3. Trifolium dubium  4. Poa annua  5. Plantago lanceolata	18 15 10 8 6		FACU FACU FACU FACU	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,
Herb Stratum (Plot size: 30 ft r  1. Andropogon virginicus 2. Anthoxanthum odoratum 3. Trifolium dubium 4. Poa annua 5. Plantago lanceolata 6. Potentilla simplex	18 15 10 8 6		FACU FACU FACU FACU FACU	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.
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Herb Stratum (Plot size: 30 ft r )  1. Andropogon virginicus 2. Anthoxanthum odoratum 3. Trifolium dubium 4. Poa annua 5. Plantago lanceolata 6. Potentilla simplex 7. Juncus effusus 8. Taraxacum officinale	18 15 10 8 6 6 5		FACU FACU FACU FACU FACU FACU FACU FACU	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
Herb Stratum (Plot size: 30 ft r )  1. Andropogon virginicus 2. Anthoxanthum odoratum 3. Trifolium dubium 4. Poa annua 5. Plantago lanceolata 6. Potentilla simplex 7. Juncus effusus 8. Taraxacum officinale 9. Vicia sativa	18 15 10 8 6 6 5 5		FACU FACU FACU FACU FACU OBL	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
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Herb Stratum (Plot size: 30 ft r )  1. Andropogon virginicus 2. Anthoxanthum odoratum 3. Trifolium dubium 4. Poa annua 5. Plantago lanceolata 6. Potentilla simplex 7. Juncus effusus 8. Taraxacum officinale 9. Vicia sativa 10. Geranium carolinianum 11. Pinus taeda  50% of total cover: 45.0  Woody Vine Stratum (Plot size: 30 ft r ) 1.	18 15 10 8 6 6 5 5 5 4 4 90	V V V	FACU FACU FACU FACU FACU FACU FACU FACU	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.
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## **VEGETATION Continued (Five Strata)** – Use scientific names of plants. Sampling Point: DP-1

Tree Stratum		% Cover	Species?	Status	Definitions of Five Vegetation Strata:
7.	_				Tree – Woody plants, excluding woody vines,
8.					approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
9.					(7.6 cm) or larger in diameter at breast neight (DBH).
					Sapling – Woody plants, excluding woody vines,
11					approximately 20 ft (6 m) or more in height and less
12					than 3 in. (7.6 cm) DBH.
			=Total Cover		Shrub - Woody Plants, excluding woody vines,
	50% of total cover:	20%	of total cover:		approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum					Herb - All herbaceous (non-woody) plants, including
7					herbaceous vines, regardless of size, and woody
	_				plants, except woody vines, less than approximately 3 ft (1 m) in height.
	_				
10					Woody Vine – All woody vines, regardless of height.
12					
	500/ -filetel		=Total Cover		
Object Organization	50% of total cover:	20%	of total cover:		
Shrub Stratum	30 ft r				
	_				
12.			=Total Cover		
	EOV of total cover:		of total cover:		
Herb Stratum	50% of total cover:	20 /0	or total cover.		
	um	2			
13 Valerianella radia	um ata	2		FAC	
				1710	
15.					
17.	_				
18.					
19.					
20.					
21.					
22.					
		90	=Total Cover		
	50% of total cover: <b>45.0</b>	0 20%	of total cover:	18.00	
Woody Vine Stratum					
6.					
7					
8.					
9					
10					
			=Total Cover		
	50% of total cover:	20%	of total cover:		
Remarks: (If observed, list	st morphological adaptation	s below.)			

SOIL Sampling Point: DP-1

Profile Desc	ription: (Describe t	to the de	pth needed to doc	ument t	he indica	ator or c	onfirm the absence of indi	icators.)			
Depth	Matrix		Redo	x Featu	res						
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks			
0 - 14	10YR 5/4	30					Sandy Loam				
0 - 14	10YR 6/2	20					Sandy Loam				
0 - 14	7.5YR 5/6	50					Sandy Loam				
14 - 16	10YR 5/3	100					Loamy Sand				
16 - 24	10YR 6/2	30	10YR 5/8	20	С		Silt Loam				
16 - 24	10YR 5/6	50					Silt Loam				
-											
<sup>1</sup> Type: C=Co	ncentration, D=Depl	etion, RN	/=Reduced Matrix,	MS=Mas	ked San	d Grains	<sup>2</sup> Location: PL=Po	pre Lining, M=Matrix.			
Hydric Soil I	ndicators: (Applica	ble to all	LRRs, unless oth	erwise r	noted.)		Indicators for Pro	oblematic Hydric Soils <sup>3</sup> :			
Histosol (	(A1)		Thin Dark S	urface (S	89) <b>(LRR</b>	S, T, U)	1 cm Muck (A	(49) <b>(LRR O)</b>			
Histic Epi	ipedon (A2)		Barrier Islan	ds 1 cm	Muck (S	12)	2 cm Muck (A	(10) <b>(LRR S)</b>			
Black His	stic (A3)		(MLRA 1	53B, 153	SD)		Coast Prairie	Redox (A16)			
Hydroger	n Sulfide (A4)		Loamy Muc	ky Miner	al (F1) <b>(L</b>	RR O)	(outside Mi	LRA 150A)			
Stratified	Layers (A5)		Loamy Gley	ed Matri	x (F2)		Reduced Veri	tic (F18)			
Organic I	Bodies (A6) (LRR P,	T, U)	Depleted Ma	atrix (F3)	)		(outside Mi	LRA 150A, 150B)			
5 cm Mud	cky Mineral (A7) <b>(LR</b>	R P, T, L	Redox Dark	Surface	(F6)		Piedmont Flo	odplain Soils (F19) (LRR P, T)			
Muck Pre	esence (A8) (LRR U)	)	Depleted Da	ark Surfa	ice (F7)		Anomalous B	right Floodplain Soils (F20)			
1 cm Mud	ck (A9) (LRR P, T)		Redox Depr	essions	(F8)		(MLRA 153B)				
Depleted	Below Dark Surface	e (A11)	Marl (F10) (	LRR U)			— Red Parent M	faterial (F21)			
Thick Da	rk Surface (A12)		Depleted Or	chric (F1	1) <b>(MLR</b>	A 151)	Very Shallow	Dark Surface (F22)			
Coast Pra	airie Redox (A16) ( <b>N</b>	ILRA 150	A)Iron-Manga	nese Ma	sses (F1	2) <b>(LRR</b>	O, P, T) (outside	e MLRA 138, 152A in FL, 154)			
Iron Mon	osulfide (A18)		Umbric Surf	ace (F13	3) <b>(LRR i</b>	P, T, U)	Other (Explain	n in Remarks)			
Sandy M	ucky Mineral (S1) <b>(L</b>	RR O, S)	Delta Ochrid	(F17) <b>(</b> I	MLRA 15	51)					
Sandy GI	eyed Matrix (S4)		Reduced Ve	ertic (F18	B) (MLRA	150A, 1	50B) <sup>3</sup> Indicators of	hydrophytic vegetation and			
Sandy Re	edox (S5)		Piedmont Fl	oodplair	Soils (F	19) <b>(MLF</b>	RA 149A)				
Stripped	Matrix (S6)		Anomalous	Bright Fl	oodplain	Soils (F2	20)				
Dark Sur	face (S7) <b>(LRR P, S</b>	, T, U)	(MLRA 14	49A, 153	C, 153D	)					
•	Below Surface (S8	)	Very Shallo		,	,	•	drology must be present,			
(LRR S			(MLRA 1	38, 152A	in FL, 1	54)	unless dist	urbed or problematic.			
Type:	.ayer (if observed):										
Depth (in	ches):						Hydric Soil Present?	Yes No			
Remarks:	<u> </u>						<u> </u>				
Some ar	aval and fill r	natori	al observed	from	0 to 1	11 inc	hes below the gro	ound surface			
•				110111	U tU	14 1110	iles below the git	dila sarrace.			
Hydric s	oil indicators	not o	bserved.								



Photograph 1: View of uplands at Data Point 1.



Photograph 2: View of non-hydric soil profile at Data Point 1.

## **U.S.** Army Corps of Engineers

## WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: SRF Franklin - Kistler T	ract Cit	ity/County: <b>Greensv</b> i	ille County	Sampling Date: 2025-04-22		
Applicant/Owner: Otterdam Techno	logy Group, LLC		State: Virginia	Sampling Point: DP-2		
Investigator(s): Nikolai Karlov, Jackson Livingst	· ·	n, Township, Range:				
Landform (hillside, terrace, etc.): Hillslope	•	ef (concave, convex, n	one): <b>None</b>	Slope (%): 3		
Subregion (LRR or MLRA): P 133A				Datum: NAD 83		
Soil Map Unit Name: 36B - Uchee Ioan			NWI classificatio			
Are climatic / hydrologic conditions on the site	typical for this time of year?	Yes	No (If no, exp	ρlain in Remarks.)		
Are Vegetation, Soil, or Hydrold	ogysignificantly disturbed	d? Are "Normal Cir	cumstances" present?	Yes _ 🗸 No		
Are Vegetation, Soil, or Hydrold	ogynaturally problematic?	? (If needed, expl	ain any answers in Rem	narks.)		
SUMMARY OF FINDINGS – Attach	site map showing sampl	ling point locatio	ns, transects, imp	ortant features, etc.		
Hydrophytic Vegetation Present?	Yes No Ist	the Sampled Area				
Hydric Soil Present?		ithin a Wetland?	Yes	No 🗸		
Wetland Hydrology Present?	∕es No ✓					
Remarks: Data point sampled in a fores	sted upland area tha	at appears to (	drain into a nea	arby wetland.		
Conditions wetter than norm	•	• •				
Conditions wetter than herm	arror tino timo or yo	<i>;</i> a:.				
LIVEROLOGY						
HYDROLOGY		<del></del>	2			
Wetland Hydrology Indicators:		<u>3</u>		ninimum of two required)		
Primary Indicators (minimum of one is require	ed; check all that apply) Aquatic Fauna (B13)		Surface Soil Cracks			
Surface Water (A1)	- · · · ·		Concave Surface (B8)			
High Water Table (A2)	Marl Deposits (B15) (LRR U	-	Drainage Patterns (I			
Saturation (A3)	Hydrogen Sulfide Odor (C1)	-	Moss Trim Lines (B	·		
Water Marks (B1)	Oxidized Rhizospheres on L					
Sediment Deposits (B2)	Presence of Reduced Iron (0	` ′	Crayfish Burrows (C			
Drift Deposits (B3)	Recent Iron Reduction in Till	illed Soils (C6)		n Aerial Imagery (C9)		
Algal Mat or Crust (B4)	Thin Muck Surface (C7)	-	Geomorphic Position	` '		
Iron Deposits (B5)	Other (Explain in Remarks)	_	Shallow Aquitard (D			
Inundation Visible on Aerial Imagery (B7)		-	FAC-Neutral Test (D	•		
Water-Stained Leaves (B9)		<u>-</u>	Sphagnum Moss (D	8) (LRR T, U)		
Field Observations:	<b></b>					
Surface Water Present? Yes	No Depth (inches):	<u> </u>				
	No Depth (inches):	—— I				
_ <del></del>	No Depth (inches): 23	Wetland H	ydrology Present?	Yes No V		
(includes capillary fringe)	*					
Describe Recorded Data (stream gauge, mon	itoring well, aerial photos, previo	ous inspections), if ava	ailable:			
Remarks:						
Saturation observed within 2	A inches from the a	round surface	however no i	ndicators of		
	_	Tourid Surrace	, HOVVEVEL HE H	idicators or		
wetland hydrology observed	•					

Pinuts taeda	Tree Stratum (Plot size: 30 ft r	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
2. Quercus alba 8		_	· ——		
Liquidambar styraciflua   5		_			' 40
Quercus pagoda   S		_	- <u> </u>		( ,
Percent of Dominant Species   That Are OBL, FACW, or FAC   Third 2			-		
That Are OBL, FACW, or FAC:   71.42   (A/B)	5.	<del>_</del> -			``
Solidation   Color	6.				
Sapting Stratum (Plot size: 30 ft r		33	=Total Cover		Prevalence Index worksheet:
Quercus alba	50% of total cover: 1	6.50 20%	6 of total cover	: 6.60	Total % Cover of: Multiply by:
	Sapling Stratum (Plot size: 30 ft r )				OBL species $0   x 1 = 0$
	1. Quercus alba	7	~	FACU	FACW species $12$ $x = 24$
	2. Ilex opaca	5	<u> </u>	FAC	FAC species 107 x 3 = 321
		4	<b>✓</b>	FAC	FACU species 33 x 4 = 132
Column Totals: 155   (A)   492 (B)		4		FAC	
		4		FACW	
Shrub Stratum (Plot size: 30 ft r	6. Liriodendron tulipifera	3		FACU	
Shrub Stratum (Plot size: 30 ft r   )	<u> </u>	29	=Total Cover		
Shrub Stratum (Plot size: 30 ft r	50% of total cover: 1	4.50 20%	-	5.80	
Carpinus caroliniana					1 — · · · · · · · · · · · · · · · · · ·
Ilex opaca   8		10	<b>~</b>	FAC	
3. Quercus alba 7		8	-		l <del></del>
Vaccinium formosum   6		7			
Social coversidation	· -	6			
Agriculture of the problem in the property of the problem in the problem in the property of the problem in the		3			1
Solution					, , , , , , , , , , , , , , , , , , , ,
Sow of total cover:   19.00   20% of total cover:   7.60	o. Querous mienauxii		-Total Cover	TACW	•
Approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).  2. Vitis rotundifolia  3. Quercus alba  4. Clethra alnifolia  5. FACW 5. Microstegium vimineum 5. FAC 5. Microstegium vimineum 5. FAC 6. Accupinus caroliniana 6. Carpinus caroliniana 7. Smilax rotundifolia 7. Quercus nigra 7. Sow of total cover: 31.50 7. Sow of total cover: 31.50 7. Sow of total cover: 31.50 7. Smilax rotundifolia 8. V FAC 9. FAC 10. Liquidambar styraciflua 11. Quercus nigra 12. FAC 13. Smilax rotundifolia 15. V FAC 16. Woody Vine Stratum (Plot size: 30 ft r ) 16. Smilax rotundifolia 16. V FAC 17. Sow of total cover: 31.50 18. Smilax rotundifolia 19. V FAC 19. Vitis rotundifolia 10. V FAC 10. Liquidambar styraciflua 10. Liquidambar styraciflua 11. Smilax rotundifolia 12. V FAC 13. Smilax rotundifolia 13. V FAC 14. Woody Vine Stratum (Plot size: 30 ft r ) 15. Smilax rotundifolia 15. V FAC 16. Woody Vine Stratum (Plot size: 30 ft r ) 17. Smilax rotundifolia 18. V FAC 19. Vitis rotundifolia 19. V FAC 10. Vitis rotundifolia 10. V FAC 10.	50% of total cover: 1		-	. 7.60	
Vaccinium pallidum		9.00 209	o di lolai covei	. 7.00	
Vitis rotundifolia  10		45			1
Region of total cover: 4.50			· <del></del>	<u> </u>	
Clethra alnifolia   5		_	- — —		
Silex opaca Silex					
S. Microstegium vimineum  S. Smilax rotundifolia  Guercus montana  Quercus montana  Carpinus caroliniana  D. Liquidambar styraciflua  Carpinus caroliniana  Carpinus caroliniana	·	_			, , ,
Smilax rotundifolia  Smilax rotundifolia  Smilax rotundifolia  DuPL  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 Stratum (Plot size: 30 ft r )  Smilax rotundifolia  Smilax rotundifol		_			
3					approximately 3 to 20 ft (1 to 6 fil) in fieight.
Carpinus caroliniana   2   FAC   FAC   Iquidambar styraciflua   2   FAC   FAC   Iquidambar styraciflua   2   Iquidambar styraciflua   3					( )// /
10.   Liquidambar styraciflua   2		_			
10.   Elquidambar styraciflua   2					
Solution		_			
50% of total cover: 31.50	11. Quercus nigra	_		FAC	<b>woody vine</b> – All woody vines, regardless of neight.
Noody Vine Stratum (Plot size: 30 ft r   )			-		
Smilax rotundifolia  6  V FAC  Vitis rotundifolia  3  V FAC  3  Hydrophytic Vegetation Present?  No  No	<del>-</del>	1.50 20%	% of total cover	12.60	
Vitis rotundifolia   3   V   FAC	Woody Vine Stratum (Plot size: 30 ft r	_)			
3. 4	Smilax rotundifolia		<b>✓</b>	FAC	
Hydrophytic  Solvential cover: 4.50 20% of total cover: 1.80 Hydrophytic  Vegetation  Present? Yes V  No No	2. Vitis rotundifolia	3		FAC	
5. 9 =Total Cover Vegetation Present? Yes No No	3				
9 =Total Cover Vegetation Present? Yes No No	4.				
50% of total cover: 4.50 20% of total cover: 1.80 Vegetation Present? Yes No No	5.				Hydronhytic
50% of total cover: 4.50 20% of total cover: 1.80 Present? Yes No		9	=Total Cover		
	50% of total cover: 4	.50 20%	% of total cover	1.80	
	Remarks: (If observed, list morphological adapt	ations below.)			•

**VEGETATION Continued (Five Strata)** – Use scientific names of plants. Sampling Point: DP-2

Total Objections		Absolute	Dominant	Indicator	Definitions of Flory Venezation Office
Tree Stratum		% Cover	Species?	Status	Definitions of Five Vegetation Strata:
0					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).
10.					Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
					than 3 in. (7.6 cm) DBH.
12		33	=Total Cover		Shrub Woody Planta avaluding woody vines
	50% of total cover: 16.50		of total cover:	6.60	Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum	30 % of total cover. 10.30	2076	oi total cover.	0.00	
· -		2		FAC	Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, <u>and</u> woody
				170	plants, except woody vines, less than approximately 3
_	_				ft (1 m) in height.
					Woody Vine – All woody vines, regardless of height.
12					
12	_	29	=Total Cover		
	50% of total cover: 14.5		of total cover:	5.80	
Shrub Stratum	30 ft r	2070	or total cover.		
7. Vaccinium pallidu		2			
0					
10.					
11	_				
12.					
		38	=Total Cover		
	50% of total cover: 19.0		of total cover:	7.60	
Herb Stratum		2070	or total cover.		
12. Quercus phellos		1		FACW	
				171011	
15.					
16.					
17.					
19.					
20	_				
21.					
22.					
		63	=Total Cover		
	50% of total cover: 31.5		of total cover:	12.60	
Woody Vine Stratum	<u> </u>				
7.					
ρ					
9.	_				
10.					
		9	=Total Cover		
	50% of total cover: 4.50		of total cover:	1.80	
Remarks: (If observed lie	st morphological adaptation				L
Tromaino. (il observeu, lis	noiphological adaptation	io bolow.j			

SOIL Sampling Point: DP-2

Profile Desci	ription: (Describe t	o the dept	h needed to docu	ıment t	he indica	tor or c	onfirm the absence	of indica	tors.)		
Depth	Matrix		Redox Features								
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Rem	arks	
0 - 4	10YR 4/2	100					Loamy Sand	No red	dox obser	ved	
4 - 12	2.5Y 5/2	100					Sandy Loam	No red	dox obser	ved	
12 - 22	2.5Y 6/4	100					Sandy Loam				
22 - 24	2.5Y 7/4	100					Sandy Loam				
_											
<sup>1</sup> Type: C=Co	ncentration, D=Depl	etion, RM=I	Reduced Matrix, N	/IS=Mas	ked San	d Grains.	<sup>2</sup> Location:	PL=Pore	Lining, M=N	Natrix.	
Hydric Soil I	Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Indicators for Problematic Hydric Soils <sup>3</sup> :										
Histosol (	A1)		Thin Dark Su	urface (S	9) <b>(LRR</b>	S, T, U)	1 cm l	Muck (A9)	(LRR O)		
Histic Epi	pedon (A2)		Barrier Island	ds 1 cm	Muck (S	12)	2 cm l	Muck (A10	) (LRR S)		
Black His	tic (A3)		(MLRA 15	3B, 153	D)		Coast	Prairie Re	edox (A16)		
Hydroger	Sulfide (A4)		Loamy Muck	y Miner	al (F1) <b>(L</b>	RR O)	(out	side MLR	A 150A)		
Stratified	Layers (A5)		Loamy Gleye	ed Matri	x (F2)		Reduc	ed Vertic	(F18)		
Organic E	Bodies (A6) (LRR P,	T, U)	Depleted Ma	trix (F3)	)		(out	side MLR	A 150A, 15	0B)	
5 cm Mud	ky Mineral (A7) (LR	R P, T, U)	Redox Dark	Surface	(F6)		Piedm	ont Flood	plain Soils (	F19) <b>(LRR P, T)</b>	
Muck Pre	sence (A8) (LRR U)		Depleted Da	rk Surfa	ce (F7)		Anoma	alous Brig	ht Floodplai	n Soils (F20)	
1 cm Mud	ck (A9) <b>(LRR P, T)</b>		Redox Depre	essions	(F8)		(MLRA 153B)				
Depleted	Below Dark Surface	(A11)	Marl (F10) <b>(L</b>	.RR U)					erial (F21)		
	k Surface (A12)		Depleted Oc	hric (F1	1) <b>(MLR</b>	151)	Very S	Shallow Da	ark Surface	(F22)	
Coast Pra	airie Redox (A16) ( <b>M</b>	LRA 150A)	Iron-Mangan	ese Ma	sses (F12	2) <b>(LRR</b> (	O, P, T) (	outside N	MLRA 138, 1	152A in FL, 154)	
Iron Mone	osulfide (A18)		Umbric Surfa	ace (F13	3) <b>(LRR F</b>	, T, U)	Other	(Explain ir	n Remarks)		
Sandy Mi	ucky Mineral (S1) (L	RR O, S)	Delta Ochric	(F17) <b>(I</b>	MLRA 15	1)					
Sandy GI	eyed Matrix (S4)		Reduced Ve	rtic (F18	) (MLRA	150A, 1	50B) <sup>3</sup> Indica	ators of hy	drophytic ve	egetation and	
Sandy Re	edox (S5)		Piedmont Flo	oodplain	Soils (F	19) <b>(MLF</b>		•	. ,		
Stripped	Matrix (S6)		Anomalous E	Bright Fl	oodplain	Soils (F2	20)				
Dark Surf	ace (S7) (LRR P, S,	T, U)	(MLRA 14	9A, 153	C, 153D)	)					
Polyvalue	Below Surface (S8)	)	Very Shallow	Dark S	Surface (F	22)	wetland hydrology must be present,				
(LRR S	s, T, U)		(MLRA 13	8, 152A	in FL, 1	54)	unle	unless disturbed or problematic.			
	ayer (if observed):										
Type: _								10			
	ches):						Hydric Soil Pres	ent?	Yes	No	
Remarks:											
Hydric so	oil indicators	not ob	served.								



Photograph 3: View of uplands at Data Point 2.



Photograph 4: View of non-hydric soil profile at Data Point 2.

#### **U.S. Army Corps of Engineers**

## WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: SRF Franklin - Kistler	Tract	City/County: Greens	ville County	Sampling Date: 2025-04-22			
Applicant/Owner: Otterdam Techno	ology Group, LLC		State: Virginia	Sampling Point: DP-3			
Investigator(s): Nikolai Karlov, Jackson Livings							
Landform (hillside, terrace, etc.): Flat		I relief (concave, convex,	none): None	Slope (%): <b>0</b>			
Subregion (LRR or MLRA): P 133A				Datum: NAD 83			
Soil Map Unit Name: 36B - Uchee Ioai			NWI classification				
Are climatic / hydrologic conditions on the site	typical for this time of year'	? Yes	No _ (If no, ex	plain in Remarks.)			
Are Vegetation, Soil, or Hydrol	logy significantly dist	urbed? Are "Normal C	Circumstances" present?	Yes 🗸 No			
Are Vegetation , Soil , or Hydrol			plain any answers in Ren	narks.)			
SUMMARY OF FINDINGS – Attach	·		-				
Hydrophytic Vegetation Present?	Yes No	Is the Sampled Area		_			
	Yes No	within a Wetland?	Yes 🗸	No			
Wetland Hydrology Present?	Yes V No			<u> </u>			
Remarks: Data point sampled in a flat	forested wetland	area at the base	of a hillslope a	and adjacent to			
•			•	ma aajaooni to			
Otterdam Road. Conditions	wetter than norm	ai for this time o	or year.				
HYDROLOGY							
Wetland Hydrology Indicators:			Secondary Indicators (n	ninimum of two required)			
Primary Indicators (minimum of one is requir	ed; check all that apply)		Surface Soil Cracks	s (B6)			
Surface Water (A1)	Aquatic Fauna (B13)		Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2)	Marl Deposits (B15) (L	.RR U)	Drainage Patterns (	(B10)			
Saturation (A3)	Hydrogen Sulfide Odor	r (C1)	Moss Trim Lines (B16)				
Water Marks (B1)	Oxidized Rhizospheres	s on Living Roots (C3)					
Sediment Deposits (B2)	Presence of Reduced	Iron (C4)	Crayfish Burrows (C	28)			
Drift Deposits (B3)	Recent Iron Reduction	in Tilled Soils (C6)	Saturation Visible o	on Aerial Imagery (C9)			
Algal Mat or Crust (B4)	Thin Muck Surface (C7	7)	✓ Geomorphic Position	on (D2)			
Iron Deposits (B5)	Other (Explain in Rema	arks)	Shallow Aquitard (D	03)			
Inundation Visible on Aerial Imagery (B7	')		FAC-Neutral Test (I	D5)			
Water-Stained Leaves (B9)			Sphagnum Moss (D	08) <b>(LRR T, U)</b>			
Field Observations:							
Surface Water Present? Yes	No Depth (inches	):					
Water Table Present? Yes	No Pepth (inches	):					
Saturation Present? Yes	No Depth (inches	): 6 Wetland	Hydrology Present?	Yes 🔽 No			
(includes capillary fringe)							
Describe Recorded Data (stream gauge, mo	nitoring well, aerial photos,	previous inspections), if a	vailable:				
Remarks:							
Nemarks.							
Wetland hydrology indicator	rs observed.						

Absolute

Dominant

Indicator

Tree Stratum (Plot siz	e: 30 It i	% Cover	Species?	Status	Dominance Test worksheet:		
1. Pinus taeda		10		FAC	Number of Dominant Species		
2. Ilex opaca		7		FAC	That Are OBL, FACW, or FAC:	10	(A)
3. Quercus falcata		7	<b>V</b>	FACU	Total Number of Dominant		
4. Quercus phellos		5		FACW	Species Across All Strata:	11	(B)
5. Liquidambar sty	raciflua	4	<u> </u>	FAC	Percent of Dominant Species		
6. Quercus alba		4	<u> </u>	FACU	That Are OBL, FACW, or FAC:	90.90	(A/B)
		39	=Total Cover		Prevalence Index worksheet:		
	50% of total cover: 19.	50 20%	of total cover:	7.80	Total % Cover of:	Multiply by:	
Sapling Stratum (Plot s	size: 30 ft r )				OBL species 0	x1 = 0	
Acer rubrum	·	7	~	FAC		x 2 = 70	
2. Pinus taeda		6	<u> </u>	FAC		x 3 = 420	
3. Ilex opaca		4		FAC	· —	x 4 = 64	
4. Liquidambar styr	aciflua	3		FAC		x 5 = 0	
5. Liriodendron tuli		1		FACU	Column Totals: 191 (A)		(B)
6.		· <u></u>			Prevalence Index = B/A		(_)
·		21	=Total Cover		Hydrophytic Vegetation Indica		
	50% of total cover: 10.		of total cover:	4.20	1 - Rapid Test for Hydrophy		
Shrub Stratum (Plot siz		2070	or total cover.		✓ 2 - Dominance Test is >50%	=	
1. Acer rubrum	e. <u>30 1(1                                   </u>	10	V	FAC	✓ 3 - Prevalence Index is ≤3.0		
2. Clethra alnifolia		8			Problematic Hydrophytic Ve		ain)
3. Ilex opaca		8		FACW	Problematic Hydrophytic ve	getation (Expi	aiii)
· <del></del>	raciflua	8		FAC			
		7		FAC			
	JSuili	3		FAC	<sup>1</sup> Indicators of hydric soil and we		must be
6. Quercus nigra		· <del></del>	Tatal Cause	FAC	present, unless disturbed or pro		
	500/ // / 20		=Total Cover	0.20	Definitions of Five Vegetation		
Herb Stratum (Plot siz	50% of total cover: 23. e: 30 ft r )	20%	of total cover:	9.20	Tree – Woody plants, excluding approximately 20 ft (6 m) or more	re in height and	
1. Gaylussacia fron		30	<b>✓</b>	FAC	(7.6 cm) or larger in diameter at	breast height (	DBH).
2. Clethra alnifolia		20		FACW	Sapling – Woody plants, exclud	ling woody vine	25
3. Smilax rotundifo	lia	15		FAC	approximately 20 ft (6 m) or more		
4. Athyrium asplen	ioides	7		FAC	than 3 in. (7.6 cm) DBH.		
5. Ilex opaca		5		FAC	Shrub - Woody Plants, excluding	na woody vines.	
6. Liquidambar styr	raciflua	4		FAC	approximately 3 to 20 ft (1 to 6 r		
7. Quercus alba		3		FACU			
8. Quercus falcata		1		FACU	<b>Herb</b> – All herbaceous (non-wood herbaceous vines, regardless of	<i>3</i> / 1	
9.		· <del></del>			plants, except woody vines, less		
10.					ft (1 m) in height.		•
11.					Woody Vine - All woody vines,	regardless of h	neiaht.
· · ·		85	=Total Cover			3	3
	50% of total cover: 42.		of total cover:	17 00			
Woody Vine Stratum (F		20 /0	oi total cover.	17.00			
`	)						
1.							
2.							
5					Hydrophytic		
			=Total Cover		Vegetation		
	50% of total cover:	20%	of total cover:	<u> </u>	Present? Yes	No	
Remarks: (If observed,	list morphological adaptati	ons below.)					

 $\begin{tabular}{ll} \textbf{VEGETATION Continued (Five Strata)} & - \textbf{Use scientific names of plants}. \end{tabular}$ 

Tree Stratum		% Cover	Species?	Status	Definitions of Five Vegetation Strata:
7. Quercus michaux	xii	2		FACW	Tree – Woody plants, excluding woody vines,
8.					approximately 20 ft (6 m) or more in height and 3 in.
0					(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
12.					than 3 in. (7.6 cm) DBH.
		39	=Total Cover		Shrub - Woody Plants, excluding woody vines,
	50% of total cover: 19.5	<b>0</b> 20%	of total cover:	7.80	approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum					Herb – All herbaceous (non-woody) plants, including
					herbaceous vines, regardless of size, <u>and</u> woody
•					plants, except woody vines, less than approximately 3
0					ft (1 m) in height.
•					Woody Vine – All woody vines, regardless of height.
12.					
		21	=Total Cover		
	50% of total cover: 10.5		of total cover:	4.20	
Shrub Stratum	30 ft r				
		2		FAC	
_					
0					
11.					
12.					
		46	=Total Cover		
	50% of total cover: 23.0	00 20%	of total cover:	9.20	
Herb Stratum					
12.					
1.1					
16.					
17.					
18.					
19.					
20.					
21		1			
22.					
		85	=Total Cover		
	50% of total cover: <b>42.5</b>	20%	of total cover:	17.00	
Woody Vine Stratum					
6.					
7.					
8.		<u> </u>			
9.		<u> </u>			
10.					
			=Total Cover		
	50% of total cover:	20%	of total cover:		
Remarks: (If observed, lis	st morphological adaptation	ns below.)			•

Sampling Point: DP-3

SOIL Sampling Point: DP-3

Profile Desc	ription: (Describe t	o the de	pth needed to docu	ıment tl	ne indic	ator or c	onfirm th	e absence	of indicate	ors.)		
Depth	Matrix		Redox	x Featur								
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Te	xture		Rer	marks	
0 - 6	2.5Y 5/2	96	2.5Y 6/4	4	С	М	Sandy	Loam				
6 - 16	2.5Y 6/3	95	10YR 6/6	5	С		Sandy C	Clay Loam				
16 - 24	2.5Y 6/4	85	7.5YR 6/8	15	С		Sandy	Clay				
<sup>1</sup> Type: C=Co	ncentration, D=Depl	etion, RN	M=Reduced Matrix, M	/IS=Mas	ked San	d Grains.		<sup>2</sup> Location:	PL=Pore L	ining, M=	=Matrix	ζ.
Hydric Soil I	ndicators: (Applica	ble to all	I LRRs, unless othe	rwise n	oted.)			Indicators	for Proble	matic Hy	ydric S	Soils <sup>3</sup> :
Histosol (	(A1)		Thin Dark Su	urface (S	89) <b>(LRR</b>	S, T, U)		1 cm M	1uck (A9) (	LRR O)		
Histic Ep	ipedon (A2)		Barrier Island	ds 1 cm	Muck (S	12)	•	2 cm M	luck (A10)	(LRR S)		
Black His	tic (A3)		(MLRA 15	3B, 153	D)			Coast I	Prairie Red	lox (A16)		
Hydroger	Sulfide (A4)		Loamy Muck	y Miner	al (F1) <b>(I</b>	_RR O)		(outs	side MLRA	150A)		
	Layers (A5)		Loamy Gleye	ed Matrix	x (F2)				ed Vertic (F			
_	Bodies (A6) (LRR P,	-	✓ Depleted Ma	, ,					side MLRA			
	cky Mineral (A7) (LR											(LRR P, T)
	esence (A8) (LRR U)		Depleted Da		, ,		•		lous Bright	t Floodpla	ain Soi	ls (F20)
	ck (A9) (LRR P, T)	(8.4.4)	Redox Depre		(F8)			-	RA 153B)	(504)		
-	Below Dark Surface	(A11)	Marl (F10) <b>(L</b>	-	4) <b>/A</b> 41 B	A 454\	•	——Red Pa		` ,		
	rk Surface (A12)	U DA 450	Depleted Oc			-	O D T)	-	hallow Dar			
	airie Redox (A16) (M	ILKA 150			•	, ,	O, P, 1)	•				in FL, 154)
	osulfide (A18)		Umbric Surfa			-		Other (	Explain in	Remarks	)	
-	ucky Mineral (S1) <b>(L</b> eyed Matrix (S4)	KK U, 3)	Delta Ochric Reduced Ve	. , .		•	50R)	3 nadioo	toro of bud	ranhutia u	, a a a ta	tion and
Sandy Re			Piedmont Flo	,			•	maica	tors of hyd	торпуше ч	vegeta	uon and
-	Matrix (S6)		Anomalous E									
	face (S7) <b>(LRR P, S</b>	T. U)	(MLRA 14	_			_0)					
	e Below Surface (S8	-	Very Shallow			•		wetla	and hydrol	oav must	be pre	esent.
(LRR S	•	,	(MLRA 13						ss disturbe			
	ayer (if observed):											
Type:							l	0 " 0			, ,	
	ches):						Hydrid	Soil Prese	ent?	Yes_		No
Remarks:												
Hydric s	oil indicator l	-3 ob	served.									



Photograph 5: View of forested wetlands at Data Point 3.



Photograph 6: View of hydric soil profile at Data Point 3.

## **U.S. Army Corps of Engineers**

## WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: SRF Franklin - Kistler Tra	act City/County	:Greensville County	Sampling Date: 2025-04-22				
Applicant/Owner: Otterdam Technology			Sampling Point: DP-4				
Investigator(s): Nikolai Karlov, Jackson Livingstone, Jillian Burgan, WSSI Section, Township, Range:							
Landform (hillside, terrace, etc.): Floodplain		ve, convex, none): None	Slope (%): <b>0</b>				
Subregion (LRR or MLRA): P 133A	,	Long: <u>-77.50759008</u>	Datum: NAD 83				
Soil Map Unit Name: 31A - Roanoke loam							
Are climatic / hydrologic conditions on the site typ	pical for this time of year?	∕es No ✓ (If no, ex	plain in Remarks.)				
Are Vegetation, Soil, or Hydrology	•	e "Normal Circumstances" present?	Yes V No No				
Are Vegetation, Soil, or Hydrology		needed, explain any answers in Ren	narks.)				
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.							
Hydrophytic Vegetation Present? Yes	s No Is the Samp	nled Area					
, , , ,	s No within a We	•	No				
Wetland Hydrology Present? Yes							
Remarks:	ad floodolain adiacent t	o a noronnial etroam (	Conditions watter				
Data point sampled in a forest		J a perennai su cam. C	Olluluons wetter				
than normal for this time of yea	ar.						
HYDROLOGY							
Wetland Hydrology Indicators:		Secondary Indicators (n	ninimum of two required)				
Primary Indicators (minimum of one is required;	check all that apply)	Surface Soil Cracks (B6)					
Surface Water (A1)	Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)					
High Water Table (A2)	Marl Deposits (B15) (LRR U)						
<del></del>	Hydrogen Sulfide Odor (C1)						
Water Marks (B1)	Oxidized Rhizospheres on Living Roo						
Sediment Deposits (B2)	Presence of Reduced Iron (C4)						
✓ Drift Deposits (B3)	Recent Iron Reduction in Tilled Soils						
Algal Mat or Crust (B4)	Thin Muck Surface (C7)						
Iron Deposits (B5)	Other (Explain in Remarks)	Shallow Aquitard (D	, ,				
Inundation Visible on Aerial Imagery (B7)		FAC-Neutral Test (I					
✓ Water-Stained Leaves (B9)		Sphagnum Moss (D	•				
Field Observations:	-		· · · · · · · · · · · · · · · · · · ·				
	Depth (inches):						
Water Table Present? Yes ✓ No							
Saturation Present? Yes V		Wetland Hydrology Present?	Yes V No				
(includes capillary fringe)	βοριπ (moneo). <u>σ</u>	Welland Hydrology Fresent.	10310				
Describe Recorded Data (stream gauge, monito	oring well, aerial photos, previous inspe	ections), if available:					
December reserved Data (cheam gaage, meme	milg well, dendi prietes, previeus inope	oliono), ii avallabio.					
Remarks:							
Watland by dralogy indicators	obsorved						
Wetland hydrology indicators	observed.						

**VEGETATION (Five Strata)** – Use scientific names of plants.

<b>'EGETATION (Five Strata)</b> – Use scier	ntific names	of plants.		Sampling Point: DP-4
Tree Stratum (Plot size: 30 ft r )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Acer rubrum	40		FAC	Number of Dominant Species
2. Nyssa sylvatica	4		FAC	That Are OBL, FACW, or FAC: 11 (A)
3.				Total Number of Dominant
4.				Species Across All Strata: 11 (B)
5.				
5.				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)
	44	=Total Cover		Prevalence Index worksheet:
50% of total cover: 22		of total cover	- 8.80	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 30 ft r )	2070	or total bover		OBL species 54
	10	V	FAC	FACW species 34
Acer rubrum			FACW	
2. Fraxinus pennsylvanica	5		FACW	
3.				FACU species $3$ $x 4 = 12$
4				UPL species $0 \times 5 = 0$
5				Column Totals: 196 (A) 449 (B)
5	_			Prevalence Index = B/A = 2.29
	15	=Total Cover		Hydrophytic Vegetation Indicators:
50% of total cover: 7.5	50 20%	of total cover	3.00	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30 ft r )				✓ 2 - Dominance Test is >50%
1. Diospyros virginiana	8	~	FAC	3 - Prevalence Index is ≤3.0 <sup>1</sup>
2. Fraxinus pennsylvanica	8		FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Acer rubrum	6		FAC	
4.				
5.				1
6.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
o	22	=Total Cover		Definitions of Five Vegetation Strata:
50% of total cover: 11.		of total cover	. 440	
	20%	OI lotal cover		<b>Tree</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
Herb Stratum (Plot size: 30 ft r )  1. Carex laevivaginata	0.5	,	ODI	(7.6 cm) or larger in diameter at breast height (DBH).
	35		OBL	
2. Campsis radicans	10		FAC	Sapling – Woody plants, excluding woody vines,
3. Saururus cernuus	10		OBL	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
4. Fraxinus pennsylvanica	<u>8</u>		FACW	
5. Boehmeria cylindrica	<u>7</u>		FACW	Shrub - Woody Plants, excluding woody vines,
6. Galium obtusum	6		FACW	approximately 3 to 20 ft (1 to 6 m) in height.
7. Carex typhina	5		OBL	Herb – All herbaceous (non-woody) plants, including
3. Athyrium asplenioides	4		FAC	herbaceous vines, regardless of size, and woody
9. Persicaria hydropiperoides	4		OBL	plants, except woody vines, less than approximately 3
10. Ilex opaca	3		FAC	ft (1 m) in height.
11. Ligustrum sinense	3		FAC	Woody Vine – All woody vines, regardless of height.
	103	=Total Cover		
50% of total cover: 51	.50 20%	of total cover	20.60	
Woody Vine Stratum (Plot size: 30 ft r				
1. Smilax rotundifolia	7	~	FAC	
2. Campsis radicans	<del>-</del> <del>5</del>		FAC	
3.			. ,	
-				
4				
5	- 10			Hydrophytic
		=Total Cover	0.40	Vegetation
50% of total cover: 6.0	<u>JU</u> 20%	of total cover	2.40	Present? Yes No No
Remarks: (If observed, list morphological adaptat	ions below.)			

**VEGETATION Continued (Five Strata)** – Use scientific names of plants.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Five Vegetation Strata:
7.				Tree – Woody plants, excluding woody vines,
8				approximately 20 ft (6 m) or more in height and 3 in.
9				(7.6 cm) or larger in diameter at breast height (DBH).
10				Sapling – Woody plants, excluding woody vines,
11				approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
12				
		=Total Cover		Shrub - Woody Plants, excluding woody vines,
50% of total cover: 22.0	20%	of total cover:	8.80	approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum				Herb – All herbaceous (non-woody) plants, including
7.				herbaceous vines, regardless of size, <u>and</u> woody plants, except woody vines, less than approximately 3
9.				ft (1 m) in height.
				Woody Vine – All woody vines, regardless of height.
10.				
11 12				
	15	=Total Cover		
50% of total cover: <b>7.5</b> 0		of total cover:	3.00	
Shrub Stratum 30 ft r				
7				
8.				
9.				
10.				
11				
12				
		=Total Cover		
50% of total cover: 11.0	0 20%	of total cover:	4.40	
Herb Stratum				
12. Smilax rotundifolia	3 2		FAC	
13. Lonicera japonica	2		FACU	
14. <u>Toxicodendron radicans</u>	1		FACU	
15. Quercus falcata 16.	<u>'</u>		FACO	
17				
18.				
19.				
20.				
21.				
22.				
	103	=Total Cover		
50% of total cover: <u>51.5</u>	0 20%	of total cover:	20.60	
Woody Vine Stratum				
6				
7				
8				
9				
10	40			
		=Total Cover	0.46	
50% of total cover: <u>6.00</u>		of total cover:	2.40	
Remarks: (If observed, list morphological adaptation	oo bolow \			

Sampling Point: DP-4

SOIL Sampling Point: DP-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)												
Depth	Matrix		Redox	x Featur								
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Tex	ture		Re	marks	
0 - 2	10YR 4/2	100					Mucky Lo	oam/Clay	No red	ox obs	erved	<u> </u>
2 - 5	10YR 4/2	95	10YR 5/4	5	С		Sandy C	lay Loam				
5 - 14	10YR 5/2	92	10YR 5/8	88	С		Silty Cla	y Loam				
14 - 24	10YR 6/2	90	5YR 5/8	10	С		Clay Lo	am				
												_
-												
			M=Reduced Matrix, N			d Grains		Location:				_
-		ble to al	I LRRs, unless othe		-			ndicators			•	Soils':
Histosol (	' '		Thin Dark Su			-			luck (A9) <b>(</b> I			
	ipedon (A2)		Barrier Island			512)		2 cm N				
Black His			(MLRA 15		-	BB (0)	_	Coast I		•	)	
	Sulfide (A4)		Loamy Muck	-		LRR ()		•	side MLRA	•		
	Layers (A5) Bodies (A6) (LRR P,	T 11\	Loamy Gleye  ✓ Depleted Ma				_		ed Vertic (F side MLRA		150B\	
_	cky Mineral (A7) <b>(LR</b>	-		, ,								(LRR P, T)
	esence (A8) <b>(LRR U</b> )		Depleted Da				_		lous Bright		, ,	
	ck (A9) (LRR P, T)	,	Redox Depre		, ,		_		RA 153B)	Пооцр	iaiii oc	0113 (1 20)
	Below Dark Surface	e (A11)	Marl (F10) <b>(L</b>		(. 0)		_	— Red Pa	-	ial (F21	)	
-	rk Surface (A12)	, (, , , ,	Depleted Oc	-	1) <b>(MLR</b>	A 151)			hallow Dar	•	,	2)
	airie Redox (A16) ( <b>N</b>	ILRA 150				-	O, P, T)	-				, ( in FL, 154)
	osulfide (A18)		Umbric Surfa		•		-, , ,	•	Explain in l			, , ,
	ucky Mineral (S1) <b>(L</b>	RR O, S)				-	_		•		,	
-	eyed Matrix (S4)		Reduced Ve	. , .		•	150B)	<sup>3</sup> Indica	tors of hydi	rophytic	vegeta	ation and
Sandy Re			Piedmont Flo	oodplain	Soils (F	19) <b>(MLF</b>	RA 149A)		,	-, ,	3	
Stripped	Matrix (S6)		Anomalous E	Bright Fl	oodplair	Soils (F2	20)					
Dark Sur	face (S7) <b>(LRR P, S</b>	, T, U)	(MLRA 14	9A, 153	C, 153D	)						
Polyvalue	e Below Surface (S8	)	Very Shallow	Dark S	Surface (	F22)	wetland hydrology must be present,					
(LRR S, T, U) (MLRA 138, 152A in FL, 154) unless dis					ss disturbe	d or pro	blema	tic.				
Restrictive L	ayer (if observed):											
Type:												
Depth (inches):					Hydric	Soil Prese	ent?	Yes_	<u> </u>	No		
Remarks:												
Hydric soil indicators A4, A7, and F3 observed.												



Photograph 7: View of forested wetlands at Data Point 4.



Photograph 8: View of hydric soil profile at Data Point 4.

## **U.S.** Army Corps of Engineers

## WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: SRF Franklin - Kistler Tract	City/County: Greensville County Sampling Date: 2025-04-22					
Applicant/Owner: Otterdam Technology Group, LLC	State: Virginia Sampling Point: DP-5					
Investigator(s): Nikolai Karlov, Jackson Livingstone, Jillian Burgan, WSSI Sec	tion, Township, Range:					
Landform (hillside, terrace, etc.): Hillslope Local r	relief (concave, convex, none): None Slope (%): 5					
Subregion (LRR or MLRA): P 133A Lat: 36.79645388						
Soil Map Unit Name: 36B - Uchee loamy sand, 0 to 6 perce						
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 disturb	<u> </u>					
<del></del>						
Are Vegetation, Soil, or Hydrology naturally problems						
SOMMART OF FINDINGS - Attach site map showing san	npling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area					
<u></u>	within a Wetland? Yes No					
Wetland Hydrology Present? Yes No _✓						
Data point sampled on the edge of a recently of	cutover upland area. This area is located on a					
hillslope that drains into an adjacent floodplair	n. Conditions wetter than normal for this time of					
year.						
HYDROLOGY						
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)					
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)					
Surface Water (A1) — Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)					
High Water Table (A2)  Marl Deposits (B15) (LR						
Saturation (A3) Hydrogen Sulfide Odor (	· · · · · · · · · · · · · · · · · · ·					
Water Marks (B1) Oxidized Rhizospheres of						
Sediment Deposits (B2)  Presence of Reduced Iro						
Drift Deposits (B3) Recent Iron Reduction in						
Algal Mat or Crust (B4)  Thin Muck Surface (C7)	· · · · · · · · · · · · · · · · · · ·					
Iron Deposits (B5) Other (Explain in Remar						
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)					
Water-Stained Leaves (B9) Sphagnum Moss (D8) (LRR T, U)						
Field Observations:						
Surface Water Present? Yes No Depth (inches):						
Water Table Present? Yes No Depth (inches):						
Saturation Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes No ✓					
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr						
Bootiso (toodidaa Bala (ottodiii gaago, moimoilig won, adiiai piiotoo, pi	oviduo inopositorio), il avaltabio.					
Remarks:						
No water table or saturation observed within 2	A inches from the ground surface					
water table of Saturation observed within 2	4 inches from the ground surface.					

 $\label{lem:VEGETATION} \textbf{(Five Strata)} \ - \textbf{Use scientific names of plants}.$ 

Tree Stratum (Plot size: 30 ft r )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Pinus taeda	20	<u> </u>	FAC	
2.			FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)
3.				Total Number of Dominant
4				Species Across All Strata: 10 (B)
5.				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 70.00 (A/B)
	20	=Total Cover		Prevalence Index worksheet:
50% of total cover: 10	0.00 20%	- % of total cover:	4.00	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 30 ft r )				OBL species 0 $x = 0$
1. Pinus taeda	_8	~	FAC	FACW species 8 x 2 = 16
2. Liriodendron tulipifera	7	~	FACU	FAC species 113 x 3 = 339
3. Quercus phellos	3		FACW	FACU species 46 x 4 = 184
Liquidambar styraciflua	2		FAC	UPL species $\frac{1}{2}$ $x = 10$
5.				Column Totals: 169 (A) 549 (B)
6.				Prevalence Index = B/A = 3.24
· -	20	=Total Cover		Hydrophytic Vegetation Indicators:
50% of total cover: 10	-	of total cover:	4.00	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30 ft r )	207	o or total cover.		✓ 2 - Dominance Test is >50%
1. Pinus taeda	20	~	EAC	3 - Prevalence Index is ≤3.0 <sup>1</sup>
Rubus pensilvanicus	12		FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Ulmus alata	- <del>12</del>		FAC	— Problematic Hydrophytic Vegetation (Explain)
	$-\frac{3}{4}$		FACU	
	$-\frac{4}{3}$	-	FAC	
5. Liquidambar styraciflua			FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be
6. Quercus falcata	_ 3		FACU	present, unless disturbed or problematic.
_	57	=Total Cover	44.40	Definitions of Five Vegetation Strata:
50% of total cover: 28	3.50 20%	% of total cover:	11.40	Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 30 ft r )				approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
Lonicera japonica	<u>12</u>		FACU	(7.0 cm) of larger in diameter at bleast height (DBH).
2. Dichanthelium laxiflorum	<u>10</u>		FAC	Sapling - Woody plants, excluding woody vines,
3. Potentilla simplex	8		FACU	approximately 20 ft (6 m) or more in height and less
4. Vitis rotundifolia	7		FAC	than 3 in. (7.6 cm) DBH.
5. Chasmanthium latifolium	5	<u> </u>	FAC	Shrub - Woody Plants, excluding woody vines,
6. Smilax rotundifolia	5		FAC	approximately 3 to 20 ft (1 to 6 m) in height.
7. Acer rubrum	4		FAC	<b>Herb</b> – All herbaceous (non-woody) plants, including
8. Liriodendron tulipifera	4		FACU	herbaceous vines, regardless of size, and woody
9. Plantago lanceolata	4		FACU	plants, except woody vines, less than approximately 3
10. Ilex opaca	3		FAC	ft (1 m) in height.
11. Lespedeza hirta	2			Woody Vine – All woody vines, regardless of height.
	66	=Total Cover		
50% of total cover: 33	3.00 20%	- % of total cover:	13.20	
Woody Vine Stratum (Plot size: 30 ft r	)			
Smilax rotundifolia	8	V	FAC	
2.				
3.				
4.	_			
5.	_			
J	8	=Total Cover		Hydrophytic
50% of total cover: 4.		_ = rotal cover: 6 of total cover:	1.60	Vegetation
		o oi total cover:		Present? Yes No No
Remarks: (If observed, list morphological adapta	tions below.)			

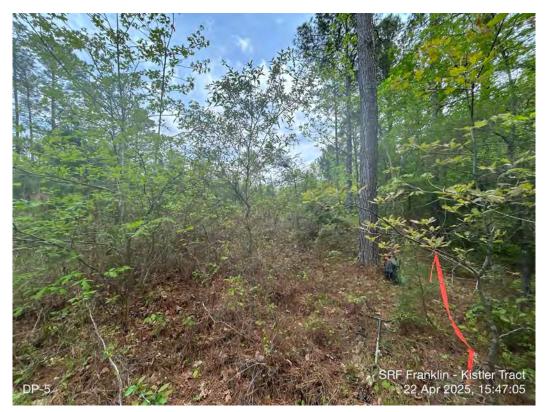
Sampling Point: \_DP-5

**VEGETATION Continued (Five Strata)** – Use scientific names of plants.

Tree Stratum		Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Five Vegetation Strata:
7					Tree – Woody plants, excluding woody vines,
8					approximately 20 ft (6 m) or more in height and 3 in.
					(7.6 cm) or larger in diameter at breast height (DBH).
10					Sapling – Woody plants, excluding woody vines,
					approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
12		20	Tatal Causa		
	50% of total cover: 10.0		=Total Cover of total cover:	4.00	Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum	30 % of total cover. 10.0	20/0	or total cover.	4.00	
· -					<b>Herb</b> – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, <u>and</u> woody
0					plants, except woody vines, less than approximately 3
					ft (1 m) in height.
10					Woody Vine – All woody vines, regardless of height.
12					
	500/ // / 40.0		=Total Cover	4.00	
Object Object	50% of total cover: 10.0	20%	of total cover:	4.00	
Shrub Stratum	30 ft r	2		E A C\A/	
<ul><li>7. Quercus phellos</li><li>8. Rhus copallinum</li></ul>		2		FACW UPL	
9. Vaccinium formo		2		FAC	
				17.0	
11.					
12.					
			=Total Cover		
	50% of total cover: 28.5	20%	of total cover:	11.40	
Herb Stratum					
12. Quercus phellos				FACW	
16.					
17					
18.					
19.					
20					
21					
22					
			=Total Cover	40.00	
M	50% of total cover: 33.0	20%	of total cover:	13.20	
Woody Vine Stratum  6.					
7.					
8.	_				
9.					
10.	_				
		8	=Total Cover		
	50% of total cover: <b>4.00</b>	20%	of total cover:	1.60	
Demortes (If about od lie	et morphological adaptation				

Sampling Point: DP-5

Profile Desc	ription: (Describe	to the depti	n needed to docu	ıment t	he indica	ator or c	onfirm the absence	of indicators.)		
Depth	Matrix		Redox	k Featur						
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
0 - 3	2.5Y 4/2	100					Loamy Sand	No redox observed		
3 - 12	2.5Y 5/3	100					Loamy Sand	No redox observed		
12 - 24	2.5Y 6/3	100					Sandy Loam			
							_			
<sup>1</sup> Type: C=Co	oncentration, D=Depl	etion, RM=I	Reduced Matrix, N	1S=Mas	ked San	d Grains.	. <sup>2</sup> Location:	PL=Pore Lining, M=Matrix.		
Hydric Soil I	ndicators: (Applica	ble to all L	RRs, unless othe	rwise r	oted.)		Indicators	for Problematic Hydric Soil	s³:	
Histosol	(A1)		Thin Dark Su	ırface (S	89) <b>(LRR</b>	S, T, U)	1 cm N	Muck (A9) (LRR O)		
Histic Ep	ipedon (A2)		Barrier Island	ds 1 cm	Muck (S	12)	2 cm N	Muck (A10) (LRR S)		
Black His	stic (A3)		(MLRA 15	3B, 153	D)		Coast	Prairie Redox (A16)		
Hydrogei	n Sulfide (A4)		Loamy Muck	y Miner	al (F1) <b>(L</b>	RR O)	(out	side MLRA 150A)		
	Layers (A5)		Loamy Gleye	ed Matri	x (F2)	,	Reduc	ed Vertic (F18)		
	Bodies (A6) (LRR P,	T, U)	Depleted Ma		, ,		(out	side MLRA 150A, 150B)		
	cky Mineral (A7) <b>(LR</b>		Redox Dark	Surface	(F6)		Piedm	ont Floodplain Soils (F19) (LR	R P, T)	
Muck Pre	esence (A8) (LRR U)	) , ,	Depleted Da	rk Surfa	ce (F7)		Anomalous Bright Floodplain Soils (F20)			
	ck (A9) (LRR P, T)	•	Redox Depre	essions	(F8)			RA 153B)	,	
	Below Dark Surface	e (A11)	Marl (F10) <b>(L</b>	.RR U)	` ,		—— Red Parent Material (F21)			
-	rk Surface (A12)									
Coast Pr	airie Redox (A16) ( <b>N</b>	ILRA 150A)				-				
Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FlIron Monosulfide (A18) Umbric Surface (F13) (LRR P, T, U) Other (Explain in Remarks)					•					
	ucky Mineral (S1) (L	RR O, S)	Delta Ochric	(F17) <b>(I</b>	VILRA 15	51)		,		
-	leyed Matrix (S4)		Reduced Ve			-	50B) <sup>3</sup> Indica	ators of hydrophytic vegetation	and	
-	edox (S5)		Piedmont Flo	•	, .			noro or rijuroprijuo rogotanori		
-	Matrix (S6)		Anomalous E				· ·			
	face (S7) (LRR P, S	, T, U)	(MLRA 14	_			,			
	e Below Surface (S8	-	•			•	wet	and hydrology must be preser	nt.	
Polyvalue Below Surface (S8) (LRR S, T, U)  Very Shallow Dark Surface (F22) (MLRA 138, 152A in FL, 154)					,	unless disturbed or problematic.				
	.ayer (if observed):									
Type:	ali a aV						Uhadaia Oail Baa	10 V N		
	iches):						Hydric Soil Pres	ent? Yes No		
Remarks:										
Hvdric s	oil indicators	not ob	served.							



Photograph 9: View of scrub/shrub wetlands at Data Point 5.



Photograph 10: View of hydric soil profile at Data Point 5.

# WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Franklin - Kistler Tract	City/County: <b>Greensville County</b> Sampling Date: 2025-04-23
Applicant/Owner: Otterdam Technology Group, I	
Investigator(s): Nikolai Karlov, Jackson Livingstone, Jillian Burgan, V	WSSI Section, Township, Range:
Landform (hillside, terrace, etc.): Flat	Local relief (concave, convex, none): None Slope (%): 2
Subregion (LRR or MLRA): P 133A Lat: 36.798	
	oam, 0 to 2 percent slopes NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time	of year? Yes No _ (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologysignificar	ntly disturbed? Are "Normal Circumstances" present? Yes 🗸 No
Are Vegetation, Soil, or Hydrologynaturally	
SUMMARY OF FINDINGS – Attach site map show	ing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ✔ No	Is the Sampled Area
Hydric Soil Present? Yes ✓ No	
Wetland Hydrology Present? Yes V No	<u> </u>
Remarks: Data point sampled in an emergent wetla	and area at the head of a gradually sloping drainage
	recently cutover. Conditions wetter than normal for
this time of year.	Trooting dataton dendinations matter and members.
tills tillie or year.	
HYDROLOGY	
	Cocondary Indicators (minimum of two required)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is required; check all that an	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6)
Primary Indicators (minimum of one is required; check all that ap	
Surface Water (A1)  High Water Table (A2)  Aquatic Fauna Marl Deposits (	
<del></del>	
<u> </u>	de Odor (C1)Moss Trim Lines (B16) spheres on Living Roots (C3) Dry-Season Water Table (C2)
<del></del> -	educed Iron (C4)  Crayfish Burrows (C8)
<del></del>	eduction in Tilled Soils (C6)  Saturation Visible on Aerial Imagery (C9)
<del></del> -	
<u> </u>	
Iron Deposits (B5) Other (Explain Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)
✓ Water-Stained Leaves (B9)	Sphagnum Moss (D8) (LRR T, U)
Field Observations:	Spriagram woss (Do) (LICK 1, O)
	(inches): 0.5
·	(inches): 0
	(inches): 0 Wetland Hydrology Present? Yes ✓ No
(includes capillary fringe)	(IIICles). 0 Wetland Hydrology Freschit: 103 103
Describe Recorded Data (stream gauge, monitoring well, aerial p	photoe previous inspections) if available:
Describe Necolded Data (Stream gauge, montoring won, acrea, p	niotos, previous inspections), ii avaliable.
Remarks:	
iveniais.	
Wetland hydrology indicators observed.	

**VEGETATION (Five Strata)** – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1.		орозного		
2.				Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)
3.				Total Number of Dominant
4	<u> </u>			Species Across All Strata: 5 (B)
5.				Percent of Dominant Species
6.	<u> </u>			That Are OBL, FACW, or FAC: 100.00 (A/B)
		=Total Cover		Prevalence Index worksheet:
50% of total cover:	20%	of total cover	·	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 30 ft r )				OBL species <u>43</u> x 1 = <u>43</u>
1.				FACW species 17 x 2 = 34
2.				FAC species 51 x 3 = 153
3.				FACU species 16 x 4 = 64
4.				UPL species $0$ $x = 0$
5.				Column Totals: 127 (A) 294 (B)
6.	·			Prevalence Index = B/A = 2.31
		=Total Cover		Hydrophytic Vegetation Indicators:
50% of total cover:	20%	of total cover	:	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30 ft r )				✓ 2 - Dominance Test is >50%
Rubus pensilvanicus	15	~	FAC	✓ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
2. Pinus taeda	8		FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Alnus serrulata	5	<u> </u>	FACW	Troblematio riyaropriyite Vegetation (Explain)
4. Morella cerifera	3		FAC	
5. Acer rubrum	2		FAC	
6. Aralia spinosa	2		FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be
6. Alalia spiliosa		=Total Cover	FAC	present, unless disturbed or problematic.  Definitions of Five Vegetation Strata:
FOO/ of total agrees 10		of total cover	. 7.80	
50% of total cover: 19.  Herb Stratum (Plot size: 30 ft r )	20%	or total cover	7.00	Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
1. Juncus effusus	25	V	OBL	(7.6 cm) or larger in diameter at breast height (DBH).
	25		FACW	
	10	•		Sapling – Woody plants, excluding woody vines,
2. Eupatorium perfoliatum	12			
3. Rhynchospora glomerata	10		OBL	approximately 20 ft (6 m) or more in height and less
<ul><li>3. Rhynchospora glomerata</li><li>4. Rumex acetosella</li></ul>	10 7		OBL FACU	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
<ul><li>3. Rhynchospora glomerata</li><li>4. Rumex acetosella</li><li>5. Rubus pensilvanicus</li></ul>	10 7 6		OBL FACU FAC	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.  Shrub - Woody Plants, excluding woody vines,
<ol> <li>Rhynchospora glomerata</li> <li>Rumex acetosella</li> <li>Rubus pensilvanicus</li> <li>Carex joorii</li> </ol>	10 7 6 5		OBL FACU FAC OBL	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
<ol> <li>Rhynchospora glomerata</li> <li>Rumex acetosella</li> <li>Rubus pensilvanicus</li> <li>Carex joorii</li> <li>Acer rubrum</li> </ol>	10 7 6 5 4		OBL FACU FAC OBL FAC	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
<ol> <li>Rhynchospora glomerata</li> <li>Rumex acetosella</li> <li>Rubus pensilvanicus</li> <li>Carex joorii</li> <li>Acer rubrum</li> <li>Lonicera japonica</li> </ol>	10 7 6 5 4 4		OBL FACU FAC OBL FAC	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
<ol> <li>Rhynchospora glomerata</li> <li>Rumex acetosella</li> <li>Rubus pensilvanicus</li> <li>Carex joorii</li> <li>Acer rubrum</li> <li>Lonicera japonica</li> <li>Persicaria longiseta</li> </ol>	10 7 6 5 4 4 4		OBL FACU OBL FAC FACU FACU	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
<ol> <li>Rhynchospora glomerata</li> <li>Rumex acetosella</li> <li>Rubus pensilvanicus</li> <li>Carex joorii</li> <li>Acer rubrum</li> <li>Lonicera japonica</li> <li>Persicaria longiseta</li> <li>Eupatorium capillifolium</li> </ol>	10 7 6 5 4 4 4 3		OBL FACU FAC OBL FAC FACU FACU FACU	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.
<ol> <li>Rhynchospora glomerata</li> <li>Rumex acetosella</li> <li>Rubus pensilvanicus</li> <li>Carex joorii</li> <li>Acer rubrum</li> <li>Lonicera japonica</li> <li>Persicaria longiseta</li> </ol>	10 7 6 5 4 4 4 3 3		OBL FACU OBL FAC FACU FACU	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
<ol> <li>Rhynchospora glomerata</li> <li>Rumex acetosella</li> <li>Rubus pensilvanicus</li> <li>Carex joorii</li> <li>Acer rubrum</li> <li>Lonicera japonica</li> <li>Persicaria longiseta</li> <li>Eupatorium capillifolium</li> <li>Pinus taeda</li> </ol>	10 7 6 5 4 4 4 3 3 88	=Total Cover	OBL FACU OBL FAC FACU FAC FACU FAC	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.
3. Rhynchospora glomerata 4. Rumex acetosella 5. Rubus pensilvanicus 6. Carex joorii 7. Acer rubrum 8. Lonicera japonica 9. Persicaria longiseta 10. Eupatorium capillifolium 11. Pinus taeda  50% of total cover: 44	10 7 6 5 4 4 4 3 3 88		OBL FACU OBL FAC FACU FAC FACU FAC	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.
<ol> <li>Rhynchospora glomerata</li> <li>Rumex acetosella</li> <li>Rubus pensilvanicus</li> <li>Carex joorii</li> <li>Acer rubrum</li> <li>Lonicera japonica</li> <li>Persicaria longiseta</li> <li>Eupatorium capillifolium</li> <li>Pinus taeda</li> </ol>	10 7 6 5 4 4 4 3 3 88	=Total Cover	OBL FACU OBL FAC FACU FAC FACU FAC	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.
3. Rhynchospora glomerata 4. Rumex acetosella 5. Rubus pensilvanicus 6. Carex joorii 7. Acer rubrum 8. Lonicera japonica 9. Persicaria longiseta 10. Eupatorium capillifolium 11. Pinus taeda  50% of total cover: 44	10 7 6 5 4 4 4 3 3 88 .00 20%	=Total Cover	OBL FACU OBL FAC FACU FAC FACU FAC	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.
3. Rhynchospora glomerata 4. Rumex acetosella 5. Rubus pensilvanicus 6. Carex joorii 7. Acer rubrum 8. Lonicera japonica 9. Persicaria longiseta 10. Eupatorium capillifolium 11. Pinus taeda  50% of total cover: 44  Woody Vine Stratum (Plot size: 30 ft r ) 1.	10 7 6 5 4 4 4 3 3 88 .00 20%	=Total Cover	OBL FACU OBL FAC FACU FAC FACU FAC	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.
3. Rhynchospora glomerata 4. Rumex acetosella 5. Rubus pensilvanicus 6. Carex joorii 7. Acer rubrum 8. Lonicera japonica 9. Persicaria longiseta 10. Eupatorium capillifolium 11. Pinus taeda  50% of total cover: 44  Woody Vine Stratum (Plot size: 30 ft r ) 1.	10 7 6 5 4 4 4 3 3 88 .00 20%	=Total Cover	OBL FACU OBL FAC FACU FAC FACU FAC	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.
3. Rhynchospora glomerata 4. Rumex acetosella 5. Rubus pensilvanicus 6. Carex joorii 7. Acer rubrum 8. Lonicera japonica 9. Persicaria longiseta 10. Eupatorium capillifolium 11. Pinus taeda  50% of total cover: 44  Woody Vine Stratum (Plot size: 30 ft r ) 1. 2.	10 7 6 5 4 4 4 3 3 88 .00 20%	=Total Cover	OBL FACU OBL FAC FACU FAC FACU FAC	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.
3. Rhynchospora glomerata 4. Rumex acetosella 5. Rubus pensilvanicus 6. Carex joorii 7. Acer rubrum 8. Lonicera japonica 9. Persicaria longiseta 10. Eupatorium capillifolium 11. Pinus taeda  50% of total cover: 44  Woody Vine Stratum (Plot size: 30 ft r ) 1. 2. 3.	10 7 6 5 4 4 4 3 3 88 .00 20%	=Total Cover	OBL FACU OBL FAC FACU FAC FACU FAC	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.
3. Rhynchospora glomerata 4. Rumex acetosella 5. Rubus pensilvanicus 6. Carex joorii 7. Acer rubrum 8. Lonicera japonica 9. Persicaria longiseta 10. Eupatorium capillifolium 11. Pinus taeda  50% of total cover: 44  Woody Vine Stratum (Plot size: 30 ft r ) 1. 2. 3. 4.	10 7 6 5 4 4 3 3 88 .00 20%	=Total Cover	OBL FACU OBL FAC FACU FAC FACU FAC	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.
3. Rhynchospora glomerata 4. Rumex acetosella 5. Rubus pensilvanicus 6. Carex joorii 7. Acer rubrum 8. Lonicera japonica 9. Persicaria longiseta 10. Eupatorium capillifolium 11. Pinus taeda  50% of total cover: 44  Woody Vine Stratum (Plot size: 30 ft r ) 1. 2. 3. 4.	10 7 6 5 4 4 4 3 3 88 00 20%	=Total Cover	OBL FACU FAC OBL FAC FACU FAC FACU FAC TACU FAC	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.

Sampling Point: DP-6

**VEGETATION Continued (Five Strata)** – Use scientific names of plants.

Sampling Point: DP-6

Tree Stratum		Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Five Vegetation Strata:
					Tree – Woody plants, excluding woody vines,
					approximately 20 ft (6 m) or more in height and 3 in.
0			·		(7.6 cm) or larger in diameter at breast height (DBH).
10.					Sapling – Woody plants, excluding woody vines,
4.4					approximately 20 ft (6 m) or more in height and less
12.					than 3 in. (7.6 cm) DBH.
			=Total Cover		Shrub - Woody Plants, excluding woody vines,
	50% of total cover:	20%	of total cover:		approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum					Herb – All herbaceous (non-woody) plants, including
7					herbaceous vines, regardless of size, and woody
<u>-</u>					plants, except woody vines, less than approximately 3 ft (1 m) in height.
					Woody Vine – All woody vines, regardless of height.
					voody vine – All woody vines, regardless of neight.
12	,		=Total Cover		
	50% of total cover:		of total cover:		
Shrub Stratum	30 ft r		or total cover.		
7. Liquidambar styra		2		FAC	
				FACU	
0					
40					
12.					
		39	=Total Cover		
	50% of total cover: 19.5	20%	of total cover:	7.80	
Herb Stratum					
12. Typha latifolia	aciflua	3		OBL	
13. <u>Liquidambar styr</u>	aciflua	2		FAC	
14					
15					
16					
17.					
18 19.					
20.					
21.					
22.					
		88	=Total Cover		
	50% of total cover: 44.0		of total cover:	17.60	
Woody Vine Stratum					
6.					
7.					
8.					
9.					
10					
			=Total Cover		
	50% of total cover:	20%	of total cover:		
Remarks: (If observed, lis	st morphological adaptation	ns below.)			

Depth   Matrix   Redox Features   Color (moist)   %   Type   Loc²   Texture   Remarks									
0 - 2 10YR 4/2 100 Sandy Clay Loam No redox observed  2 - 6 10YR 4/1 96 10YR 4/6 4 C M Sandy Clay Loam  6 - 10 10YR 5/2 100 Sandy Loam No redox observed  10 - 22 10YR 6/2 94 10YR 7/4 6 C M Loamy Sand  22 - 24 10YR 7/2 90 10YR 6/8 10 C Sandy Clay									
2 - 6 10YR 4/1 96 10YR 4/6 4 C M Sandy Clay Loam 6 - 10 10YR 5/2 100 Sandy Loam No redox observed  10 - 22 10YR 6/2 94 10YR 7/4 6 C M Loamy Sand  22 - 24 10YR 7/2 90 10YR 6/8 10 C Sandy Clay									
10 - 22									
10 - 22 10YR 6/2 94 10YR 7/4 6 C M Loamy Sand 22 - 24 10YR 7/2 90 10YR 6/8 10 C Sandy Clay  1 Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.  1 Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  1 Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O)  1 Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S)  1 Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O)  2 Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR O)  3 Stratified Layers (A6) (LRR P, T, U) Pepleted Matrix (F3) (outside MLRA 150A) (strate (F6) Piedmont Floodplain Soils (F19) (LRR P, T)  4 Muck Presence (A8) (LRR V) Depleted Dark Surface (F6) Piedmont Floodplain Soils (F20)  5 cm Mucky Mineral (A7) (LRR P, T) Redox Depressions (F8) (MLRA 153B) Redox Dark Surface (F11) (MLRA 151) (outside MLRA 138, 152A in FL, 154)  Coast Prairie Redox (A16) (MRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154)  Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Reduced Vertic (F18) (MLRA 150A) 13 Indicators of hydrophytic vegetation and									
22 - 24 10YR 7/2 90 10YR 6/8 10 C Sandy Clay									
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.  Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)  Histic Epipedon (A2)  Barrier Islands 1 cm Muck (S12)  Black Histic (A3)  (MLRA 153B, 153D)  Coast Prairie Redox (A16)  Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Muck Presence (A8) (LRR U)  Depleted Dark Surface (F7)  Hork Dark Surface (A12)  Depleted Deblow Dark Surface (A11)  Thick Dark Surface (A12)  Coast Prairie Redox (A16)  (MLRA 150A)  Redox Dark Surface (F1) (LRR O)  Marl (F10) (LRR U)  Depleted Dark Surface (F1)  Marl (F10) (LRR U)  Depleted Ochric (F11) (MLRA 151)  Thick Dark Surface (A16)  Umbric Surface (F1) (LRR P, T, U)  Detail Chric (F11) (MLRA 151)  Sandy Mucky Mineral (S1) (LRR O, S)  Delta Ochric (F17) (MLRA 150A)  Reduced Vertic (F18)  Vary Shallow Dark Surface (F22)  Other (Explain in Remarks)  Slandy Gleyed Matrix (S4)  Slandy Gleyed Matrix (S4)  Indicators for Problematic Hydric Soils <sup>2</sup> :  Location: PL=Pore Lining, M=Matrix.  Indicators for Problematic Hydric Soils <sup>3</sup> :  Indicators									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Muck Presence (A8) (LRR U)  Depleted Dark Surface (F7)  Anomalous Bright Floodplain Soils (F20)  1 cm Muck (A9) (LRR P, T, U)  Pepleted Dark Surface (F7)  Thick Dark Surface (A12)  Coast Prairie Redox (A16)  Marl (F10) (LRR U)  Depleted Ochric (F11) (MLRA 151)  Ton Monosulfide (A18)  Sandy Mucky Mineral (S1) (LRR O, S)  Delta Ochric (F17) (MLRA 150A, 150B)  Indicators for Problematic Hydric Soils³:  1 cm Muck (A9) (LRR O)  1 cm Muck (A9) (LRR O)  Coast Prairie Redox (A10)  (outside MLRA 150A)  Reduced Vertic (F18)  (outside MLRA 150A, 150B)  Piedmont Floodplain Soils (F19) (LRR P, T, U)  Anomalous Bright Floodplain Soils (F20)  (MLRA 153B)  Red Parent Material (F21)  Very Shallow Dark Surface (F22)  (outside MLRA 138, 152A in FL, 154)  Other (Explain in Remarks)  Sandy Mucky Mineral (S1) (LRR O, S)  Delta Ochric (F17) (MLRA 151)  Reduced Vertic (F18) (MLRA 150A, 150B)  Pidmont Floodplain Soils (F20)  (mush LRA 153B)  Reduced Vertic (F12)  (mush LRA 153B)  Coast Prairie Redox (A16) (MLRA 150A)  Iron-Manganese Masses (F12) (LRR O, P, T)  Other (Explain in Remarks)									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Muck Presence (A8) (LRR U)  Depleted Dark Surface (F7)  Anomalous Bright Floodplain Soils (F20)  1 cm Muck (A9) (LRR P, T, U)  Pepleted Dark Surface (F7)  Thick Dark Surface (A12)  Depleted Ochric (F11) (MLRA 151)  Coast Prairie Redox (A16)  Marl (F10) (LRR U)  Depleted Ochric (F11) (MLRA 151)  Tron Monosulfide (A18)  Sandy Mucky Mineral (S1) (LRR O, S)  Delta Ochric (F17) (MLRA 150A, 150B)  Indicators for Problematic Hydric Soils³:  1 cm Muck (A9) (LRR O)  1 cm Muck (A9) (LRR O)  Coast Prairie Redox (A16)  (outside MLRA 150A)  Reduced Vertic (F18)  (outside MLRA 150A, 150B)  Piedmont Floodplain Soils (F19) (LRR P, T)  Anomalous Bright Floodplain Soils (F20)  Muck Presence (A8) (LRR P, T)  Redox Depressions (F8)  (MLRA 153B)  Red Parent Material (F21)  Very Shallow Dark Surface (F22)  (outside MLRA 138, 152A in FL, 154)  Other (Explain in Remarks)  Sandy Mucky Mineral (S1) (LRR O, S)  Delta Ochric (F17) (MLRA 151)  Reduced Vertic (F18) (MLRA 150A, 150B)  Black Histic Epipedon (A2)  Lam Muck (A9) (LRR O, S)  Delta Ochric (F17) (MLRA 150A, 150B)  Indicators of hydrophytic vegetation and									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Muck Presence (A8) (LRR U)  Depleted Dark Surface (F7)  Anomalous Bright Floodplain Soils (F20)  1 cm Muck (A9) (LRR P, T, U)  Pepleted Dark Surface (F7)  Thick Dark Surface (A12)  Depleted Ochric (F11) (MLRA 151)  Coast Prairie Redox (A16)  Marl (F10) (LRR U)  Depleted Ochric (F11) (MLRA 151)  Tron Monosulfide (A18)  Sandy Mucky Mineral (S1) (LRR O, S)  Delta Ochric (F17) (MLRA 150A, 150B)  Indicators for Problematic Hydric Soils³:  1 cm Muck (A9) (LRR O)  1 cm Muck (A9) (LRR O)  Coast Prairie Redox (A16)  (outside MLRA 150A)  Reduced Vertic (F18)  (outside MLRA 150A, 150B)  Piedmont Floodplain Soils (F19) (LRR P, T)  Anomalous Bright Floodplain Soils (F20)  Muck Presence (A8) (LRR P, T)  Redox Depressions (F8)  (MLRA 153B)  Red Parent Material (F21)  Very Shallow Dark Surface (F22)  (outside MLRA 138, 152A in FL, 154)  Other (Explain in Remarks)  Sandy Mucky Mineral (S1) (LRR O, S)  Delta Ochric (F17) (MLRA 151)  Reduced Vertic (F18) (MLRA 150A, 150B)  Black Histic Epipedon (A2)  Lam Muck (A9) (LRR O, S)  Delta Ochric (F17) (MLRA 150A, 150B)  Indicators of hydrophytic vegetation and									
Histosol (A1)									
Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A4)  Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Muck Presence (A8) (LRR P, T)  Thick Dark Surface (A12)  Coast Prairie Redox (A16)  Marl (F10) (LRR U)  Depleted Ochric (F11) (MLRA 151)  Ton Monosulfide (A18)  Sandy Mucky Mineral (S1) (LRR O, S)  Barrier Islands 1 cm Muck (S12)  (MLRA 153B, 153D)  Coast Prairie Redox (A16)  (outside MLRA 150A)  Reduced Vertic (F18)  (outside MLRA 150A, 150B)  Piedmont Floodplain Soils (F19) (LRR P, T)  Anomalous Bright Floodplain Soils (F20)  (MLRA 153B)  Red Parent Material (F21)  Very Shallow Dark Surface (F22)  (outside MLRA 150A, 150B)  Piedmont Floodplain Soils (F19) (LRR P, T)  Anomalous Bright Floodplain Soils (F20)  (MLRA 153B)  Red Parent Material (F21)  Very Shallow Dark Surface (F22)  (outside MLRA 138, 152A in FL, 154)  Other (Explain in Remarks)  3 Indicators of hydrophytic vegetation and									
Black Histic (A3)(MLRA 153B, 153D)— Coast Prairie Redox (A16)Hydrogen Sulfide (A4)Loamy Mucky Mineral (F1) (LRR O)(outside MLRA 150A)Stratified Layers (A5)Loamy Gleyed Matrix (F2)Reduced Vertic (F18)Organic Bodies (A6) (LRR P, T, U)✓ Depleted Matrix (F3)(outside MLRA 150A, 150B)— 5 cm Mucky Mineral (A7) (LRR P, T, U)Redox Dark Surface (F6)— Piedmont Floodplain Soils (F19) (LRR P, T)— Muck Presence (A8) (LRR U)Depleted Dark Surface (F7)— Anomalous Bright Floodplain Soils (F20)— 1 cm Muck (A9) (LRR P, T)Redox Depressions (F8)(MLRA 153B)— Depleted Below Dark Surface (A11)Marl (F10) (LRR U)— Red Parent Material (F21)— Thick Dark Surface (A12)Depleted Ochric (F11) (MLRA 151)— Very Shallow Dark Surface (F22)— Coast Prairie Redox (A16) (MLRA 150A)Iron-Manganese Masses (F12) (LRR O, P, T)(outside MLRA 138, 152A in FL, 154)— Iron Monosulfide (A18)Umbric Surface (F13) (LRR P, T, U)Other (Explain in Remarks)— Sandy Mucky Mineral (S1) (LRR O, S)Delta Ochric (F17) (MLRA 151)3Indicators of hydrophytic vegetation and									
Hydrogen Sulfide (A4) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Pepleted Matrix (F3) Corganic Bodies (A6) (LRR P, T, U) Pepleted Matrix (F3) Peledmont Floodplain Soils (F19) (LRR P, T) Muck Presence (A8) (LRR U) Pepleted Dark Surface (F7) Anomalous Bright Floodplain Soils (F20) Anomalous Bright Floodplain Soils (F20) Peleted Below Dark Surface (A11) Pepleted Derived Derived Cohric (F11) (MLRA 151) Pepleted Ochric (F13) (LRR O, P, T) Iron Monosulfide (A18) Sandy Mucky Mineral (S1) (LRR O, S) Sandy Gleyed Matrix (S4)  Loamy Mucky Mineral (F1) (LRR O) Loamy Mucky Mineral (F1) (LRR O) Peduced Vertic (F18) (MLRA 150A) Reduced Vertic (F18) (MLRA 150A, 150B) Reduced Vertic (F18) (MLRA 150A, 150B)  Reduced Vertic (F18) (MLRA 150A, 150B)  Reduced Vertic (F18) (MLRA 150A, 150B)  Reduced Vertic (F18) (MLRA 150A, 150B)									
Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Stratified Layers (A5)  Organic Bodies (A6) (LRR P, T, U)  Stratified Layers (A5)  Depleted Matrix (F2)  Reduced Vertic (F18)  (outside MLRA 150A, 150B)  Piedmont Floodplain Soils (F19) (LRR P, T)  Anomalous Bright Floodplain Soils (F20)  (MLRA 153B)  Reduced Vertic (F19) (LRR P, T)  Anomalous Bright Floodplain Soils (F20)  (MLRA 153B)  Red Parent Material (F21)  Pepleted Below Dark Surface (A12)  Depleted Ochric (F11) (MLRA 151)  Thick Dark Surface (A12)  Depleted Ochric (F11) (MLRA 151)  Iron-Manganese Masses (F12) (LRR O, P, T)  Iron Monosulfide (A18)  Umbric Surface (F13) (LRR P, T, U)  Sandy Mucky Mineral (S1) (LRR O, S)  Delta Ochric (F17) (MLRA 151)  Reduced Vertic (F18) (MLRA 150A, 150B)  Piedmont Floodplain Soils (F20)  Mucky Bright Floodplain Soils (F20)  (MLRA 153B)  Ped Parent Material (F21)  Very Shallow Dark Surface (F22)  (outside MLRA 138, 152A in FL, 154)  Other (Explain in Remarks)  Sandy Mucky Mineral (S1) (LRR O, S)  Sandy Gleyed Matrix (S4)  Reduced Vertic (F18) (MLRA 150A, 150B)									
Organic Bodies (A6) (LRR P, T, U)									
<ul> <li>Muck Presence (A8) (LRR U)</li> <li>Depleted Dark Surface (F7)</li> <li>Anomalous Bright Floodplain Soils (F20)</li> <li>(MLRA 153B)</li> <li>Redox Depressions (F8)</li> <li>Marl (F10) (LRR U)</li> <li>Red Parent Material (F21)</li> <li>Very Shallow Dark Surface (F22)</li> <li>Coast Prairie Redox (A16) (MLRA 150A)</li> <li>Iron-Manganese Masses (F12) (LRR O, P, T)</li> <li>Iron Monosulfide (A18)</li> <li>Sandy Mucky Mineral (S1) (LRR O, S)</li> <li>Sandy Gleyed Matrix (S4)</li> <li>Depleted Dark Surface (F7)</li> <li>Marl (F10) (LRR U)</li> <li>Redox Depressions (F8)</li> <li>(MLRA 153B)</li> <li>Redox Depressions (F8)</li> <li>(MLRA 151)</li> <li>Very Shallow Dark Surface (F22)</li> <li>(outside MLRA 138, 152A in FL, 154)</li> <li>Other (Explain in Remarks)</li> <li>3Indicators of hydrophytic vegetation and</li> </ul>									
1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B)									
Thick Dark Surface (A12)  Coast Prairie Redox (A16) (MLRA 150A)  Iron-Manganese Masses (F12) (LRR O, P, T)  Iron Monosulfide (A18)  Sandy Mucky Mineral (S1) (LRR O, S)  Sandy Gleyed Matrix (S4)  Depleted Ochric (F11) (MLRA 151)  Loron-Manganese Masses (F12) (LRR O, P, T)  Umbric Surface (F13) (LRR P, T, U)  Delta Ochric (F17) (MLRA 151)  Reduced Vertic (F18) (MLRA 150A, 150B)  Very Shallow Dark Surface (F22)  (outside MLRA 138, 152A in FL, 154)  Other (Explain in Remarks)									
Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Iron Monosulfide (A18) Umbric Surface (F13) (LRR P, T, U) Other (Explain in Remarks) Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B)  Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Other (Explain in Remarks)									
Iron Monosulfide (A18)									
Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151) Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B)   3Indicators of hydrophytic vegetation and									
Sandy Gleyed Matrix (S4) Reduced Vertic (F18) (MLRA 150A, 150B) <sup>3</sup> Indicators of hydrophytic vegetation and									
Condu Dedex (CE) Diadex of Electricity College (E40) (BB DA 4404)									
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A)									
Stripped Matrix (S6) Anomalous Bright Floodplain Soils (F20)									
Dark Surface (S7) (LRR P, S, T, U) (MLRA 149A, 153C, 153D)									
Polyvalue Below Surface (S8)  Very Shallow Dark Surface (F22) wetland hydrology must be present,									
(LRR S, T, U) (MLRA 138, 152A in FL, 154) unless disturbed or problematic.									
Restrictive Layer (if observed):									
Type:									
Depth (inches): No									
Remarks:									
Hydric soil indicator F3 observed.									



Photograph 11: View of emergent wetlands at Data Point 6.



Photograph 12: View of hydric soil profile at Data Point 6.

# WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Franklin - Kistler T	ract	City/County: Greens	ville County	Sampling Date: 2025-04-23		
Applicant/Owner: Otterdam Techno	logy Group, LLC			Sampling Point: DP-7		
Investigator(s): Nikolai Karlov, Jackson Livingst	tone, Jillian Burgan, WSSI Ser	ction, Township, Range:				
Landform (hillside, terrace, etc.): Flat	•	relief (concave, convex,		Slope (%): <b>1</b>		
Subregion (LRR or MLRA): P 133A			-77.50931592	Datum: NAD 83		
Soil Map Unit Name: 40A - Woodingto						
Are climatic / hydrologic conditions on the site	typical for this time of year?	Yes	No (If no, e	xplain in Remarks.)		
Are Vegetation, Soil, or Hydrold	ogysignificantly distur	rbed? Are "Normal (	Circumstances" present?	Yes V No		
Are Vegetation , Soil , or Hydrold	ogy naturally problem	atic? (If needed, ex	plain any answers in Re	marks.)		
SUMMARY OF FINDINGS – Attach	<u> </u>					
Hydrophytic Vegetation Present?	Yes ✔ No	Is the Sampled Area				
Hydric Soil Present?	Yes No V	within a Wetland?	Yes	No 🗸		
Wetland Hydrology Present?	Yes No V			·		
Remarks: Data point sampled in a flat u	•	eurrounding are	a anneared to	have been cut		
	-	_		liave been cut		
over several years ago. Cond	ditions wetter than	n normal for thi	s time of year.			
HYDROLOGY						
Wetland Hydrology Indicators:			Secondary Indicators (	minimum of two required)		
Primary Indicators (minimum of one is require	ed; check all that apply)		Surface Soil Crack			
Surface Water (A1)	Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2)	Marl Deposits (B15) (LR	RR U)	Drainage Patterns	(B10)		
Saturation (A3)	Hydrogen Sulfide Odor	(C1)	Moss Trim Lines (B16)			
Water Marks (B1)	Oxidized Rhizospheres	on Living Roots (C3)	C3) Dry-Season Water Table (C2)			
Sediment Deposits (B2)	Presence of Reduced In	ron (C4)	Crayfish Burrows (C8)			
Drift Deposits (B3)	Recent Iron Reduction is	<u> </u>				
Algal Mat or Crust (B4)	Thin Muck Surface (C7)					
Iron Deposits (B5)	Other (Explain in Remai	· · · · · · · · · · · · · · · · · · ·				
Inundation Visible on Aerial Imagery (B7)		•	FAC-Neutral Test			
Water-Stained Leaves (B9)			Sphagnum Moss (			
Field Observations:			<u> </u>			
Surface Water Present? Yes	No Depth (inches):	:				
Water Table Present? Yes	No Depth (inches):					
Saturation Present? Yes	No Pepth (inches):		Hydrology Present?	Yes No 🗸		
(includes capillary fringe)						
Describe Recorded Data (stream gauge, mor	nitoring well, aerial photos, p	previous inspections), if a	vailable:			
Remarks:						
Remains.						
No water table or saturation	observed within 2	24 inches from	the ground sur	face.		
			3			

**VEGETATION (Five Strata)** – Use scientific names of plants.

Total Number of Dominant Species   Total Sp	Tree Stratum (Plot size: 30 ft r )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
Total Number of Deminant Species Across All Strata: 3 (B)  Percent of Dominant Species That Are OBL, FACW, of FAC; 66.66 (WB)  Frevalence Index worksheet: Total Scover of Multiply by:  Sapling Stratum (Plot size: 30 ft r )  Sapling Stratum (Plot size: 30 ft r )  Sapling Stratum (Plot size: 30 ft r )  Prevalence Index worksheet: Total Scover of Multiply by:  OBL species 0 x 1 = 0  FACW species 1 x 2 = 2  FACW species 1 x 2 = 2  FACW species 44 x 4 = 176  UPL species 0 x 5 = 0  Column Totals: 152 (A) 499 (B)  Prevalence Index = BA = 3.28  Hydrophytic Vegetation Indicators:  1 Rapid Test for Hydrophytic Vegetation  1 Plinus taeda 5 FACU  Allanthus altissima 4 FACU  Solve of total cover: 34.00 20% of total cover: 13.60  Ilex opaca 3 FACW  Species Across All Stratum  Faculty of the Scover of Multiply by:  OBL species 0 x 1 = 0  FACW species 1 x 2 = 2  FACW species 107 x x 3 = 321  FACW species 44 x 4 = 176  Column Totals: 152 (A) 499 (B)  Prevalence Index = BA = 3.28  Hydrophytic Vegetation Indicators:  1 Rapid Test for Hydrophytic Vegetation  2 Problematic Hydrophytic Vegetation  2 Problematic Hydrophytic Vegetation Faculty of Problematic Scover of Scover of Hydrophytic Vegetation Indicators:  1 Rapid Test for Hydrophytic Vegetation Indicators:  1 Problematic Hydrophytic Vegetat	1	_			I
Percent of Dominant Species That Are OBL, FACW, or FAC: 66.66 (A/E)  Prevalence Index workshee:  Total % Cover of: Multiply by: OBL species 1 x 2 = 2 FAC species 1 0 x 1 = 0 FACW species 1 x 2 = 2 FAC species 1 0 x 3 = 321 FACU species 44 x 4 = 176 UPL species 0 x 5 = 0 Column Totals: 152 (A) 499 (B) Prevalence Index = BAC = 3.28  Indicators of total cover:  Shrub Stratum (Plot size: 30 ft r ) I. Pinus taeda 5	3.				Total Number of Dominant
Total Cover   Solution   Soluti		_			`,
Total % Cover of: Multiply by:	6.				'
Columbridge		-	=Total Cover		Prevalence Index worksheet:
FACW species   1	50% of total cover:	20%	of total cover	:	Total % Cover of: Multiply by:
2.	Sapling Stratum (Plot size: 30 ft r )				OBL species <u>0</u> x 1 = <u>0</u>
2.	1.				FACW species 1 x 2 = 2
1	2				FAC species 107 x 3 = 321
1.	3.				FACU species 44 x 4 = 176
Column Totals: \frac{152}{152}	4.				
	5.	_			
### Shrub Stratum (Plot size: 30 ft r )  1. Pinus taeda 50	6.				
1 - Rapid Test for Hydrophytic Vegetation   1 - Rapid Test for Hydrophytic Vegetation   2 - Problematic Hydrophytic V	· -	_	=Total Cover		
Shrub Stratum (Plot size: 30 ft r   1. Pinus taeda	50% of total cover	20%			
1. Pinus taeda 2. Rubus pensilvanicus 3. Liriodendron tulipifera 4. Ailanthus altissima 4. FACU 5. Ilex opaca 3. FAC 3. Ilex opaca 3. FAC 4. Andropogon virginicus 4. Andropogon virginicus 3. Poa annua 10 FACU 5. Rubus pensilvanicus 5. FAC 5. Rubus pensilvanicus 5. FAC 5. Rubus pensilvanicus 6. Racer rubrum			or total cover.		1 <del></del>
Rubus pensilvanicus    Rubus pensilvanicus		50		E40	
3. Liriodendron tulipifera 4. Ailanthus altissima 4					
A Alianthus altissima  4					Problematic Hydrophytic Vegetation (Explain)
Solution					
Trail Cover					
Befinitions 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).	5. Ilex opaca	_ 3		FAC	, , , , , , , , , , , , , , , , , , , ,
Solution	6				present, unless disturbed or problematic.
Andropogon virginicus  Andropogon virginicus  Eupatorium capillifolium  Eupatorium capillifolium cap					Definitions of Five Vegetation Strata:
Andropogon virginicus  25	<del></del>	<b>4.00</b> 20%	of total cover	13.60	
Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) 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 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.   Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.   Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.   Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.   Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.   Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.   Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.   Webstance	Herb Stratum (Plot size: 30 ft r )				
3. Poa annua 10 FACU 4. Pinus taeda 5 FAC 5. Rubus pensilvanicus 5 FAC 6. Lespedeza hirta 4 Pinus taeda 2 FAC 7. Ilex opaca 2 FAC 8. Acer rubrum 1 FACW 9. Viola sagittata 1 FACW 11. Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.  8. 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.  8. FACW 9. Viola sagittata 1 FACW 11. Shrub - Woody Plants, excluding woody 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.  Woody Vine - All woody vines, regardless of height.  Hydrophytic	1. Andropogon virginicus	35		FAC	(7.6 cm) or larger in diameter at breast height (DBH).
10 FACU Pinus taeda 10 FACU Pinus taeda 5 FAC Rubus pensilvanicus 5 FAC Lespedeza hirta 4 FACU Rubus paca 2 FAC Buse paca 3 Acer rubrum 1 FACU Buse paca 3 Viola sagittata 1 FACW 11.    10.   11.   11.   12.   13.   14.   14.   14.   15.   15.   15.   16.   16.   17.   16.   17.   16.   17.   17.   18.   18.   19.   19.   19.   10.   1	2. Eupatorium capillifolium	25		FACU	Sapling – Woody plants, excluding woody vines,
Shrub - Woody Vine Stratum (Plot size: 30 ft r )  Rubus pensilvanicus 5 FAC  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.  Woody Vine Stratum (Plot size: 30 ft r )  Reflection of the cover of the co	3. Poa annua	10		FACU	approximately 20 ft (6 m) or more in height and less
Lespedeza hirta  Ilex opaca  Acer rubrum  Viola sagittata  1  FAC  Total Cover  50% of total cover: 44.00  Moody Vine Stratum (Plot size: 30 ft r  1.	4. Pinus taeda	5		FAC	than 3 in. (7.6 cm) DBH.
Ilex opaca   2	5. Rubus pensilvanicus	<u> </u>		FAC	Shrub - Woody Plants, excluding woody vines,
Acer rubrum  Viola sagittata  Table 20. Viola sagittata  Table 20. Table 20. Viola sagittata  Table 20. Vio	6. Lespedeza hirta	4			approximately 3 to 20 ft (1 to 6 m) in height.
Acer rubrum  Viola sagittata  Table 20. Viola sagittata  Table 20. Table 20. Viola sagittata  Table 20. Vio	7. Ilex opaca	2		FAC	Harb All berbassaus (non woody) plants, including
Plants, except woody vines, less than approximately 3 ft (1 m) in height.  Woody Vine – All woody vines, regardless of height.    Solution   Stratum   (Plot size: 30 ft r   )		1		FAC	
10.		_ <del></del>		FACW	· • • · · · · · · · · · · · · · · · · ·
11.	10.				ft (1 m) in height.
88		_			Woody Vine – All woody vines, regardless of height.
50% of total cover: 44.00 20% of total cover: 17.60  Noody Vine Stratum (Plot size: 30 ft r )  1.	····	88	-Total Cover		
Noody Vine Stratum (Plot size: 30 ft r	500/ -filetal A			17.60	
1	_	<u>4.00</u> 20%	or total cover	17.00	
2	· · · · · · · · · · · · · · · · · · ·	)			
3	1.				
4	2				
5. Hydrophytic	3.	_			
Table Court	4				
T-(-1 A	5.				Hydrophytic
		<u> </u>	=Total Cover		
50% of total cover: 20% of total cover: Present? Yes No	50% of total cover:	20%	of total cover		
Remarks: (If observed, list morphological adaptations below.)		ations below.)			

Sampling Point: \_DP-7

# **VEGETATION Continued (Five Strata)** – Use scientific names of plants. Sampling Point: DP-7

Time	Tree Stratum		Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Five Vegetation Strata:
9.	7					
10.	0					
11						Sapling – Woody plants, excluding woody vines,
Saping Stratum	11					
Nerb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, including herbaceous vines, regardless of size, and woody plants, including herbaceous vines, regardless of size, and woody plants, keept woody vines, less than approximately 3 ft (1 m) in height.    Nerb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, keept woody vines, less than approximately 3 ft (1 m) in height.    Woody Vine - All woody vines, regardless of height.	_	_		=Total Cover		Shrub - Woody Plants, excluding woody vines,
7.		50% of total cover:	20%	of total cover:		approximately 3 to 20 ft (1 to 6 m) in height.
8.	· -					
10						
11.						Woody Vine – All woody vines, regardless of height.
Total Cover   Sow of total cover:   20% of total cover:   Shrub Stratum   30 ft r						
Shrub Stratum   30 ft r   20% of total cover:						
Shrub Stratum   30 ft r   7.						
7. 8. 9. 10. 11. 12.  68 = =Total Cover 50% of total cover: 44.00 20% of total cover: 17.60  Woody Vine Stratum  6. 7. 8. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9.			20%	of total cover:		
8. 9. 10. 11. 12. 68=Total Cover 13.60   Herb Stratum 12.	<u> </u>					
9.	0					
10.						
11. 12.						
12.	11.					
Solid Cover   34.00   20% of total cover   13.60	12.					
Herb Stratum   12.						
12		50% of total cover: <b>34.0</b>	20%	of total cover:	13.60	
13. 14. 15. 16. 17. 18. 19. 20. 21. 22.  88 = Total Cover 50% of total cover: 44.00 20% of total cover: 17.60  Woody Vine Stratum 6. 7. 8. 9. 10. =Total Cover 50% of total cover: 20% of total cover:						
14.	13					
15	4.4					
16	45	•				
18.	<u> </u>					
19	17					
20. 21. 22.  88 =Total Cover 50% of total cover: 44.00 20% of total cover: 17.60  Woody Vine Stratum 6. 7. 8. 9. 10. =Total Cover 50% of total cover: 20% of total cover:	· -					
21						
22	21	_				
88						
Woody Vine Stratum           6.           7.           8.           9.           10.           =Total Cover           50% of total cover:           20% of total cover:			88	=Total Cover		
6		50% of total cover: <b>44.0</b>	0 20%	of total cover:	17.60	
7.	Woody Vine Stratum					
8	6.					
9						
10=Total Cover		_				
=Total Cover 50% of total cover: 20% of total cover:						
50% of total cover: 20% of total cover:	10.	_	<del></del>	=Total Cover		
		50% of total cover:				
	Remarks: (If observed, I	ist morphological adaptation	ns below.)			1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)											
Depth	Matrix		Redo	x Featur							
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Rem	arks	
0 - 4	2.5Y 4/2	100					Loamy Sand	No re	edox obser	ved	
4 - 12	2.5Y 5/3	100					Sandy Loam	<u> </u>			
12 - 24	2.5Y 7/4	100					Sandy Loam	1			
-											
-											
-											
-											
¹Type: C=Co	oncentration, D=Depl	etion, RM=R	educed Matrix, N	//S=Mas	ked San	d Grains	<sup>2</sup> Locat	ion: PL=Por	e Lining, M=N	Matrix.	
Hydric Soil I	ndicators: (Applica	ble to all LR	Rs, unless other	rwise r	oted.)		Indica	tors for Pro	blematic Hy	dric Soils <sup>3</sup> :	
Histosol	(A1)	_	Thin Dark Su	urface (S	69) <b>(LRR</b>	S, T, U)	1	cm Muck (As	9) <b>(LRR 0)</b>		
Histic Ep	ipedon (A2)	-	Barrier Island	ds 1 cm	Muck (S	12)	2	cm Muck (A	10) (LRR S)		
Black His	stic (A3)		(MLRA 15	3B, 153	D)		C	oast Prairie F	Redox (A16)		
Hydrogei	n Sulfide (A4)	_	Loamy Muck	y Miner	al (F1) <b>(L</b>	RR O)		(outside ML	.RA 150A)		
Stratified	Layers (A5)	_	Loamy Gleye	ed Matri	x (F2)		R	educed Verti	c (F18)		
Organic I	Bodies (A6) (LRR P,	T, U)	Depleted Ma	trix (F3)	)		· <del></del>	outside ML	.RA 150A, 15	0B)	
5 cm Mu	cky Mineral (A7) (LR	R P, T, U)	Redox Dark	Surface	(F6)		Pi	edmont Floo	dplain Soils (	F19) <b>(LRR</b>	P, T)
Muck Pre	esence (A8) (LRR U)	<u>-</u>	Depleted Da	rk Surfa	ce (F7)		Aı	nomalous Br	ight Floodplai	n Soils (F2	0)
1 cm Mu	ck (A9) (LRR P, T)	_	Redox Depre	essions	(F8)		(MLRA 153B)				
Depleted	Below Dark Surface	e (A11)	Marl (F10) <b>(L</b>	.RR U)			R	ed Parent Ma	aterial (F21)		
Thick Da	rk Surface (A12)	_	Depleted Oc	hric (F1	1) <b>(MLR</b>	A 151)	V	ery Shallow I	Dark Surface	(F22)	
Coast Pr	Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O				O, P, T)	(outside	MLRA 138, 1	152A in FL	, 154)		
Iron Monosulfide (A18) Umbric Surface (F13) (LRR P, T, U)					Other (Explain in Remarks)						
Sandy M	ucky Mineral (S1) (L	RR O, S)	Delta Ochric	(F17) <b>(</b> I	MLRA 15	1)					
Sandy G	leyed Matrix (S4)	_	Reduced Ve	rtic (F18	) (MLRA	150A, 1	<sup>3</sup> Indicators of hydrophytic vegetation and				
Sandy R	edox (S5)	_	Piedmont Flo	oodplain	Soils (F	19) <b>(MLF</b>				•	
Stripped	Matrix (S6)	_	Anomalous I	3right FI	oodplain	Soils (F2	20)				
Dark Sur	face (S7) <b>(LRR P, S</b>	, T, U)	(MLRA 14	9A, 153	C, 153D)	)					
Polyvalue	e Below Surface (S8	)	Very Shallov	Dark S	Surface (F	22)		wetland hyd	Irology must b	e present,	
(LRR S	S, T, U)	_	(MLRA 13	8, 152A	in FL, 1	54)	unless disturbed or problematic.				
	ayer (if observed):										
Type:											
Depth (in Remarks:	iches):						Hydric Soil	Present?	Yes	No	
Hydric s	oil indicators	not obs	served.								



Photograph 13: View of uplands at Data Point 7.



Photograph 14: View of non-hydric soil profile at Data Point 7.

# WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Franklin - Kistler T	ract	City/County: Greens	ville County	Sampling Date: 2025-04-23		
Applicant/Owner: Otterdam Techno				a Sampling Point: DP-8		
Investigator(s): Nikolai Karlov, Jackson Livingst	tone, Jillian Burgan, WSSI Secti	ion, Township, Range:				
Landform (hillside, terrace, etc.): Seep	Local re	elief (concave, convex,	none): None	Slope (%): 2		
Subregion (LRR or MLRA): P 133A			•	Datum: NAD 83		
Soil Map Unit Name: 40A - Woodingto						
Are climatic / hydrologic conditions on the site	typical for this time of year?	Yes	No _ (If no,	explain in Remarks.)		
Are Vegetation, Soil, or Hydrold	ogysignificantly disturb	oed? Are "Normal C	Circumstances" present	t? Yes 🗸 No		
Are Vegetation, Soil, or Hydrold	ogynaturally problemat	tic? (If needed, exp	plain any answers in R	emarks.)		
SUMMARY OF FINDINGS – Attach	site map showing sam	pling point location	ons, transects, in	nportant features, etc.		
Hydrophytic Vegetation Present?	Yes No I	Is the Sampled Area				
, , , ,	<del></del>	within a Wetland?	Yes 🗸	No		
,	Yes No					
Remarks: Data point sampled in a fore:	cted wetland locate	od within a hre	ander groundy	voter seen and		
•			•	•		
near a perennial stream. Cor	iditions wetter than	n normal for th	is time of year	r.		
HYDROLOGY						
Wetland Hydrology Indicators:			Secondary Indicators	(minimum of two required)		
Primary Indicators (minimum of one is require	ed; check all that apply)		Surface Soil Crac	cks (B6)		
Surface Water (A1)	Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2)	Marl Deposits (B15) (LRR	R U)	Drainage Pattern			
Saturation (A3)	Hydrogen Sulfide Odor (C	O1)	Moss Trim Lines (B16)			
Water Marks (B1)	Oxidized Rhizospheres or					
Sediment Deposits (B2)	Presence of Reduced Iron					
Drift Deposits (B3)	Recent Iron Reduction in	Tilled Soils (C6)		e on Aerial Imagery (C9)		
Algal Mat or Crust (B4)	Thin Muck Surface (C7)		Geomorphic Posi			
Iron Deposits (B5)	Other (Explain in Remarks	(S)	Shallow Aquitard	(D3)		
Inundation Visible on Aerial Imagery (B7)		,	FAC-Neutral Tes			
Water-Stained Leaves (B9)			Sphagnum Moss	, ,		
Field Observations:						
Surface Water Present? Yes	No Depth (inches):					
	No Depth (inches):	<del></del>				
Saturation Present? Yes	No Depth (inches): 7		Hydrology Present?	Yes V No		
(includes capillary fringe)						
Describe Recorded Data (stream gauge, mor	nitoring well, aerial photos, pre	evious inspections), if a	vailable:			
Remarks:						
Wetland hydrology indicator	s observed.					

Tre	e Stratum (Plot size: 30 ft r )	% Cover	Species?	Status	Dominance Test worksheet:	
1.	Pinus taeda	12		FAC	Number of Dominant Species	
2.	Liriodendron tulipifera	7		FACU	That Are OBL, FACW, or FAC: 14 (A)	
3.	Quercus michauxii	7		FACW	Total Number of Dominant	
4.	Acer rubrum	5		FAC	Species Across All Strata: 15 (B)	
5.	llex opaca	5		FAC	Percent of Dominant Species	
6.	Nyssa sylvatica	5		FAC	That Are OBL, FACW, or FAC: 93.33 (A/B)	
			=Total Cover		Prevalence Index worksheet:	
	50% of total cover: 22.0		of total cover:	8.80	Total % Cover of: Multiply by:	
San	oling Stratum (Plot size: 30 ft r )				OBL species 5 x 1 = 5	
1.	Carpinus caroliniana	12	V	FAC	FACW species 71	
2.	Nyssa sylvatica	6		FAC	FAC species 167 x 3 = 501	
	llex opaca	5		FAC	FACU species 24	
4.	Quercus alba	4		FACU	$\begin{array}{cccc} \text{UPL species} & \overline{0} & & x5 = \overline{0} \\ \end{array}$	
т. 5.	Quercus nigra	3		FAC	Column Totals: 267 (A) 744 (B)	
5. 6.	Liquidambar styraciflua	2		FAC	Prevalence Index = B/A = 2.78	
0.	Elquidambal Styraemaa		=Total Cover	170	Hydrophytic Vegetation Indicators:	
	50% of total cover: 16.0		of total cover:	6.40		
Ch.,		20%	or total cover.	0.40	1 - Rapid Test for Hydrophytic Vegetation	
	ub Stratum (Plot size: 30 ft r ) Clethra alnifolia	15		E40)4/	✓ 2 - Dominance Test is >50%	
1.	Carpinus caroliniana	12		FACW	✓ 3 - Prevalence Index is ≤3.0 <sup>1</sup>	
2.		8		FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
3.	Magnolia virginiana	8		FACW		
4.	Pinus taeda			FAC		
5.	llex opaca	5		FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be	
6.	Liquidambar styraciflua	5		FAC	present, unless disturbed or problematic.	
			=Total Cover	10.00	Definitions of Five Vegetation Strata:	
	50% of total cover: 32.0	<u>0                                    </u>	of total cover:	12.80	Tree – Woody plants, excluding woody vines,	
	b Stratum (Plot size: 30 ft r )				approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).	
1.	Vitis rotundifolia	20		FAC		
2.	Clethra alnifolia	18		FACW	Sapling – Woody plants, excluding woody vines,	
3.	Smilax rotundifolia	12		FAC	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.	
4.	Arundinaria tecta	8		FACW		
5.	Parthenocissus quinquefolia	5		FACU	Shrub - Woody Plants, excluding woody vines,	
6.	Quercus michauxii	5		FACW	approximately 3 to 20 ft (1 to 6 m) in height.	
7.	Carpinus caroliniana	4		FAC	Herb – All herbaceous (non-woody) plants, including	
8.	Pinus taeda	4		FAC	herbaceous vines, regardless of size, and woody	
9.	Polystichum acrostichoides	4		FACU	plants, except woody vines, less than approximately 3 ft (1 m) in height.	
10.	Vaccinium formosum	4		FAC	, ,	
11.	Ilex opaca	3		FAC	Woody Vine – All woody vines, regardless of height.	
		102	=Total Cover			
	50% of total cover: 51.0	0 20%	of total cover:	20.40		
Wo	ody Vine Stratum (Plot size: 30 ft r )					
1.	Smilax rotundifolia	15		FAC		
2.	Vitis rotundifolia	12	<u> </u>	FAC		
3.						
4.						
5.					Hydrophytia	
		27	=Total Cover		Hydrophytic Vegetation	
50% of total cover: 13.50 20% of total cover: 5.40 Present? Yes No						
Rer	narks: (If observed, list morphological adaptation				<del></del>	
	,	,				

Tree Stratum	% Cover	Species?	Status	Definitions of Five Vegetation Strata:
7. Carpinus caroliniana	3	<u> </u>	FAC	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).
				Senting Woods plants evaluding woods since
10				Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
11				than 3 in. (7.6 cm) DBH.
12		=Total Cover		Shrub - Woody Plants, excluding woody vines,
50% of total cover: <b>22.</b> 0		of total cover:	8.80	approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum	207	or total cover.	0.00	
· · · · · · · · · · · · · · · · · · ·				<b>Herb</b> – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, <u>and</u> woody
7. 8.				plants, except woody vines, less than approximately 3
				ft (1 m) in height.
10.				Woody Vine – All woody vines, regardless of height.
11.				
12.				
.2.	32	=Total Cover		
50% of total cover: <b>16.</b> 0		of total cover:	6.40	
Shrub Stratum 30 ft r		, o. tota. 00 to		
7. Vaccinium corymbosum	5		FACW	
8. Liriodendron tulipifera	2		FACU	
9. Quercus michauxii	2		FACW	
10. Quercus nigra	2		FAC	
11.				
12.				
	64	=Total Cover		
50% of total cover: 32.0		of total cover:	12.80	
Herb Stratum				
12. Juncus effusus	3		OBL	
13. Magnolia virginiana	3		FACW	
14. Carex debilis	2			
15. Mitchella repens	2		FACU	
16. Rubus pensilvanicus	2		FAC	
17. Woodwardia areolata	2		OBL	
18. Andropogon virginicus	1		FAC	
19.			FACW	
20.				
21.				
22.				
	102	=Total Cover		
50% of total cover: 51.0	0 20%	of total cover:	20.40	
Woody Vine Stratum				
6.				
7.				
8.				
9.				
10.				
	27	=Total Cover		
50% of total cover: <b>13.5</b>	0 20%	of total cover:	5.40	
Remarks: (If observed, list morphological adaptation				
, , , , , , , , , , , , , , , , , , , ,				

Profile Desc	ription: (Describe t	to the de	pth needed to doc	ument t	he indica	ator or c	onfirm the absence of	f indicators.)
Depth	Matrix			x Featu				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 5	10YR 3/2	100					Silt Loam	
5 - 10	10YR 5/2	90	10YR 5/6	10	C		Sandy Clay Loam	_
10 - 18	10YR 5/2	70	10YR 6/6	15	С		Sandy Clay Loam	
12 - 18			7.5YR 5/8	15	С	M	Sandy Clay Loam	
18 - 24	7.5YR 5/8	75	10YR 6/2	25	D	М	Sandy Clay	
-								
<sup>1</sup> Type: C=Co	ncentration, D=Depl	etion, RI	M=Reduced Matrix, I	MS=Mas	ked San	d Grains.	<sup>2</sup> Location: Pl	L=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Applica	ble to al	I LRRs, unless other	erwise r	oted.)		Indicators fo	or Problematic Hydric Soils <sup>3</sup> :
Histosol (	(A1)		Thin Dark S	urface (S	89) <b>(LRR</b>	S, T, U)	1 cm Mu	ck (A9) <b>(LRR O)</b>
Histic Ep	ipedon (A2)		Barrier Islan	ds 1 cm	Muck (S	12)	2 cm Mu	ck (A10) <b>(LRR S)</b>
Black His	stic (A3)		(MLRA 15	3B, 153	D)		Coast Pr	rairie Redox (A16)
Hydroger	n Sulfide (A4)		Loamy Mucl	ky Miner	al (F1) <b>(L</b>	RR O)	(outsid	de MLRA 150A)
Stratified	Layers (A5)		Loamy Gley	ed Matri	x (F2)		Reduced	l Vertic (F18)
Organic I	Bodies (A6) (LRR P,	T, U)	✓ Depleted Ma	atrix (F3)	)		(outsid	de MLRA 150A, 150B)
5 cm Mud	cky Mineral (A7) <b>(LR</b>	R P, T, l	J) Redox Dark	Surface	(F6)		Piedmon	t Floodplain Soils (F19) (LRR P, T)
Muck Pre	esence (A8) (LRR U)	)	Depleted Da	rk Surfa	ce (F7)		Anomalo	ous Bright Floodplain Soils (F20)
1 cm Mud	ck (A9) (LRR P, T)		Redox Depr	essions	(F8)		(MLRA	( 153B)
Depleted	Below Dark Surface	e (A11)	Marl (F10) (	LRR U)			—Red Pare	ent Material (F21)
Thick Da	rk Surface (A12)		Depleted Oc	hric (F1	1) <b>(MLR</b>	A 151)	Very Sha	allow Dark Surface (F22)
Coast Pra	airie Redox (A16) ( <b>M</b>	ILRA 15	OA)Iron-Mangar	nese Ma	sses (F1	2) <b>(LRR</b> (	O, P, T) (ou	ıtside MLRA 138, 152A in FL, 154)
Iron Mon	osulfide (A18)		Umbric Surf	ace (F13	3) <b>(LRR I</b>	P, T, U)	Other (Ex	xplain in Remarks)
Sandy M	ucky Mineral (S1) <b>(L</b>	RR O, S	Delta Ochrid	(F17) <b>(</b> I	MLRA 15	51)		
Sandy G	eyed Matrix (S4)		Reduced Ve	rtic (F18	B) (MLRA	150A, 1	50B) <sup>3</sup> Indicato	rs of hydrophytic vegetation and
Sandy Re	edox (S5)		Piedmont FI	oodplair	Soils (F	19) <b>(MLF</b>	RA 149A)	
Stripped	Matrix (S6)		Anomalous	Bright Fl	oodplain	Soils (F2	20)	
Dark Sur	face (S7) <b>(LRR P, S</b>	, T, U)	(MLRA 14	I9A, 153	C, 153D	)		
Polyvalue	e Below Surface (S8	)	Very Shallov	v Dark S	Surface (F	<del>-</del> 22)	wetlan	nd hydrology must be present,
(LRR S	S, T, U)		(MLRA 13	88, 152A	in FL, 1	54)	unless	s disturbed or problematic.
	ayer (if observed):							
Type:								
Depth (in	ches):						Hydric Soil Presen	nt? Yes V No No
Remarks:								
Hydric s	oil indicator l	=3 ob	served.					



Photograph 15: View of forested wetlands at Data Point 8.



Photograph 16: View of hydric soil profile at Data Point 8.

# WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Franklin - Kistler Tract City.	//County: Greensville County Sampling Date: 2025-04-24				
Applicant/Owner: Otterdam Technology Group, LLC	State: Virginia Sampling Point: DP-9				
Investigator(s): Nikolai Karlov, Jackson Livingstone, Jillian Burgan, WSSI Section,					
	(concave, convex, none): Concave Slope (%): 0				
Subregion (LRR or MLRA): P 133A	Long: -77.510791 Datum: NAD 83				
Soil Map Unit Name: 40A - Woodington fine sandy loam, 0 to 2					
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes No (If no, explain in Remarks.)				
	<u> </u>				
Are Vegetation, Soil, or Hydrologysignificantly disturbed?					
Are Vegetation, Soil, or Hydrologynaturally problematic?  SUMMARY OF FINDINGS – Attach site map showing samplii					
	ng point rodutions, transcotts, impertant reactive, etc.				
<u> </u>	ne Sampled Area				
<u> </u>	nin a Wetland? Yes No				
Wetland Hydrology Present? Yes _ V No					
Data point sampled in a forested wetland located	within a broader floodplain area.				
Conditions wetter than normal for this time of yea	ar.				
HYDROLOGY					
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)				
Surface Water (A1) — Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2)  Marl Deposits (B15) (LRR U)					
Saturation (A3) Hydrogen Sulfide Odor (C1)	Moss Trim Lines (B16)				
Water Marks (B1) Oxidized Rhizospheres on Liv					
Sediment Deposits (B2)  Presence of Reduced Iron (C					
Drift Deposits (B3)  Recent Iron Reduction in Tille  This Music Surface (C7)	<u> </u>				
Algal Mat or Crust (B4)  Thin Muck Surface (C7)  Other (Explain in Remarks)	✓ Geomorphic Position (D2)				
Iron Deposits (B5) Other (Explain in Remarks)	Shallow Aquitard (D3)				
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)				
Water-Stained Leaves (B9)	Sphagnum Moss (D8) (LRR T, U)				
Field Observations:					
Surface Water Present? Yes V No Depth (inches): 1	<u> </u>				
Water Table Present? Yes V No Depth (inches): 5	<u> </u>				
Saturation Present? Yes No Depth (inches): 0	Wetland Hydrology Present? Yes   ✓ No				
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous	us inspections) if available:				
Doorloo Nessiasa Data (stisatii gaags,s.ii.s.ii.g ii.s.i, ssiisi pii.s.i.s., pii.s.i.s.	as mopositoris), ii avaitasis.				
Remarks:					
Wetland hydrology indicators observed. System f	fed by upstream swamp feature connected				
via culvert under Allen Road to the north.					
Vid odivort dildoi / lion itoda to tilo ilortin					

i re	e Stratum (Plot size: 30 ft r )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1.	Acer rubrum	25	✓ ✓	FAC	
2.	Ulmus americana	15		FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 13 (A)
3.	Liquidambar styraciflua	12		FAC	
3. 4.	Carpinus caroliniana	10		FAC	Total Number of Dominant Species Across All Strata: 15 (B)
<del>4</del> . 5.	Liriodendron tulipifera	10			`` ` ′
	Quercus alba	6		FACU	Percent of Dominant Species That Are OBL. FACW, or FAC: 86.66 (A/B)
6.	Quei cus aiba		=Total Cover	FACU	(**=)
	FOO/ of total acress AA			. 17 60	Prevalence Index worksheet:
0	50% of total cover: 44.	20%	of total cover	17.00	Total % Cover of: Multiply by:
	oling Stratum (Plot size: 30 ft r			E40	OBL species 3 x1 = 3
1.	Ulmus americana	10		FAC	FACW species $50$ $x = 100$
2.	Carpinus caroliniana	10		FAC	FAC species 190 x 3 = 570
3.	Liriodendron tulipifera	8		FACU	FACU species 2415103 x 4 = 9660412
4.	Liquidambar styraciflua	5		FAC	UPL species $0 \times 5 = 0$
5.	llex opaca	2		FAC	Column Totals: 2415346 (A) 9661085 (B)
6.					Prevalence Index = B/A = 3.99
			=Total Cover		Hydrophytic Vegetation Indicators:
	50% of total cover: 17.5	20%	of total cover	7.00	1 - Rapid Test for Hydrophytic Vegetation
Shr	ub Stratum (Plot size: 30 ft r )				✓ 2 - Dominance Test is >50%
1.	llex opaca	8		FAC	3 - Prevalence Index is ≤3.0 <sup>1</sup>
2.	Carpinus caroliniana	8		FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.	Ligustrum sinense	7		FAC	
4.	Acer rubrum	5		FAC	
5.	Liquidambar styraciflua	4		FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be
6.	Fraxinus pennsylvanica	2		FACW	present, unless disturbed or problematic.
		34	=Total Cover		Definitions of Five Vegetation Strata:
	50% of total cover: 17.0	20%	of total cover	: 6.80	Tree – Woody plants, excluding woody vines,
Her	<u>b Stratum</u> (Plot size: 30 ft r )				approximately 20 ft (6 m) or more in height and 3 in.
1.	Microstegium vimineum	00		FAC	(7.6 cm) or larger in diameter at breast height (DBH).
١.	Microstegium viimineum	30	~		
1. 2.	Campsis radicans	20	<u> </u>	FAC	Sapling – Woody plants, excluding woody vines.
				FAC FACW	Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
2.	Campsis radicans	20	<u> </u>		
2. 3.	Campsis radicans Carex crinita	20 15 15	<i>V</i>	FACW	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
<ol> <li>2.</li> <li>3.</li> <li>4.</li> <li>5.</li> </ol>	Campsis radicans Carex crinita Lonicera japonica	20 15 15 10	<i>V</i>	FACW FACU	approximately 20 ft (6 m) or more in height and less
<ol> <li>2.</li> <li>3.</li> <li>4.</li> <li>5.</li> </ol>	Campsis radicans Carex crinita Lonicera japonica Polystichum acrostichoides Impatiens capensis	20 15 15 10 10	<i>V</i>	FACU FACU FACW	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.
<ol> <li>3.</li> <li>4.</li> <li>6.</li> <li>7.</li> </ol>	Campsis radicans Carex crinita Lonicera japonica Polystichum acrostichoides Impatiens capensis Viola sagittata	20 15 15 10 10 8	<i>V</i>	FACU FACU	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
<ol> <li>3.</li> <li>4.</li> <li>6.</li> <li>7.</li> <li>8.</li> </ol>	Campsis radicans Carex crinita Lonicera japonica Polystichum acrostichoides Impatiens capensis Viola sagittata Arisaema triphyllum	20 15 15 10 10 8 6	<i>V</i>	FACW FACU FACW FACW FACW	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.
<ol> <li>3.</li> <li>4.</li> <li>6.</li> <li>7.</li> <li>8.</li> <li>9.</li> </ol>	Campsis radicans Carex crinita Lonicera japonica Polystichum acrostichoides Impatiens capensis Viola sagittata Arisaema triphyllum Dichanthelium clandestinum	20 15 15 10 10 8 6 4	<i>V</i>	FACW FACU FACW FACW FACW FACW	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
2. 3. 4. 5. 6. 7. 8. 9.	Campsis radicans Carex crinita Lonicera japonica Polystichum acrostichoides Impatiens capensis Viola sagittata Arisaema triphyllum Dichanthelium clandestinum Juncus effusus	20 15 15 10 10 8 6 4 3	<i>V</i>	FACW FACU FACW FACW FACW FACW FACW OBL	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.
2. 3. 4. 5. 6. 7. 8. 9.	Campsis radicans Carex crinita Lonicera japonica Polystichum acrostichoides Impatiens capensis Viola sagittata Arisaema triphyllum Dichanthelium clandestinum	20 15 15 10 10 8 6 4 3		FACW FACU FACW FACW FACW FACW	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
2. 3. 4. 5. 6. 7. 8. 9.	Campsis radicans Carex crinita Lonicera japonica Polystichum acrostichoides Impatiens capensis Viola sagittata Arisaema triphyllum Dichanthelium clandestinum Juncus effusus Parthenocissus quinquefolia	20 15 15 10 10 8 6 4 3 3	V V	FACW FACU FACW FACW FACW FACW FACW FACW	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.
2. 3. 4. 5. 6. 7. 8. 9. 10.	Campsis radicans Carex crinita Lonicera japonica Polystichum acrostichoides Impatiens capensis Viola sagittata Arisaema triphyllum Dichanthelium clandestinum Juncus effusus Parthenocissus quinquefolia	20 15 15 10 10 8 6 4 3 3		FACW FACU FACW FACW FACW FACW FACW FACW	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.
2. 3. 4. 5. 6. 7. 8. 9. 10.	Campsis radicans  Carex crinita  Lonicera japonica  Polystichum acrostichoides  Impatiens capensis  Viola sagittata  Arisaema triphyllum  Dichanthelium clandestinum  Juncus effusus  Parthenocissus quinquefolia  50% of total cover: 62.00  ody Vine Stratum (Plot size: 30 ft r )	20 15 15 10 10 8 6 4 3 3 124	=Total Cover	FACW FACU FACW FACW FACW FACW FACW COBL FACU FACU FACU	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.
2. 3. 4. 5. 6. 7. 8. 9. 10. 11.	Campsis radicans Carex crinita Lonicera japonica Polystichum acrostichoides Impatiens capensis Viola sagittata Arisaema triphyllum Dichanthelium clandestinum Juncus effusus Parthenocissus quinquefolia  50% of total cover: 62.00 Ody Vine Stratum (Plot size: 30 ft r ) Smilax rotundifolia	20 15 15 10 10 8 6 4 3 3 124 200 20%	=Total Cover	FACW FACU FACW FACW FACW FACW FACW FACW OBL FACU FACU	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.
2. 3. 4. 5. 6. 7. 8. 9. 10. 11. Wo	Campsis radicans  Carex crinita  Lonicera japonica  Polystichum acrostichoides  Impatiens capensis  Viola sagittata  Arisaema triphyllum  Dichanthelium clandestinum  Juncus effusus  Parthenocissus quinquefolia  50% of total cover: 62.00  ody Vine Stratum (Plot size: 30 ft r )	20 15 15 10 10 8 6 4 3 3 124	=Total Cover	FACW FACU FACW FACW FACW FACW FACW COBL FACU FACU FACU	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.
2. 3. 4. 5. 6. 7. 8. 9. 10. 11.  Wo 1. 2. 3.	Campsis radicans Carex crinita Lonicera japonica Polystichum acrostichoides Impatiens capensis Viola sagittata Arisaema triphyllum Dichanthelium clandestinum Juncus effusus Parthenocissus quinquefolia  50% of total cover: 62.00 Ody Vine Stratum (Plot size: 30 ft r ) Smilax rotundifolia	20 15 15 10 10 8 6 4 3 3 124 200 20%	=Total Cover	FACW FACU FACW FACW FACW FACW FACW FACW OBL FACU FACU	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.
2. 3. 4. 5. 6. 7. 8. 9. 10. 11.  Wo 1. 2. 3. 4.	Campsis radicans Carex crinita Lonicera japonica Polystichum acrostichoides Impatiens capensis Viola sagittata Arisaema triphyllum Dichanthelium clandestinum Juncus effusus Parthenocissus quinquefolia  50% of total cover: 62.00 Ody Vine Stratum (Plot size: 30 ft r ) Smilax rotundifolia	20 15 15 10 10 8 6 4 3 3 124 200 20%	=Total Cover	FACW FACU FACW FACW FACW FACW FACW FACW OBL FACU FACU	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.
2. 3. 4. 5. 6. 7. 8. 9. 10. 11.  Wo 1. 2. 3.	Campsis radicans Carex crinita Lonicera japonica Polystichum acrostichoides Impatiens capensis Viola sagittata Arisaema triphyllum Dichanthelium clandestinum Juncus effusus Parthenocissus quinquefolia  50% of total cover: 62.00 Ody Vine Stratum (Plot size: 30 ft r ) Smilax rotundifolia	20 15 15 10 10 8 6 4 3 3 124 200 20%	=Total Cover of total cover	FACW FACU FACW FACW FACW FACW FACW FACW OBL FACU FACU	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.
2. 3. 4. 5. 6. 7. 8. 9. 10. 11.  Wo 1. 2. 3. 4.	Campsis radicans Carex crinita Lonicera japonica Polystichum acrostichoides Impatiens capensis Viola sagittata Arisaema triphyllum Dichanthelium clandestinum Juncus effusus Parthenocissus quinquefolia  50% of total cover: 62.00dy Vine Stratum (Plot size: 30 ft r ) Smilax rotundifolia Vitis rotundifolia	20 15 15 10 10 8 6 4 3 3 124 200 20% 8 6	=Total Cover  of total cover	FACW FACU FACW FACW FACW OBL FACU FACU FACU FACU	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.  Hydrophytic Vegetation
2. 3. 4. 5. 6. 7. 8. 9. 10. 11.  Wo 1. 2. 3. 4.	Campsis radicans Carex crinita Lonicera japonica Polystichum acrostichoides Impatiens capensis Viola sagittata Arisaema triphyllum Dichanthelium clandestinum Juncus effusus Parthenocissus quinquefolia  50% of total cover: 62.00 Ody Vine Stratum (Plot size: 30 ft r ) Smilax rotundifolia	20 15 15 10 10 8 6 4 3 3 124 200 20% 8 6	=Total Cover of total cover	FACW FACU FACW FACW FACW OBL FACU FACU FACU FACU	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.

 $\begin{tabular}{ll} \textbf{VEGETATION Continued (Five Strata)} & - \textbf{Use scientific names of plants}. \end{tabular}$ 

7. Pinus taeda 5 FACW Quercus michauxii 5 FACW 3 FACW 3 FACW 4 FACW 5 FA	Tree Stratum	% Cover	Species?	Status	Definitions of Five Vegetation Strata:
Section   Sect	7. Pinus taeda	5		FAC	Tree – Woody plants, excluding woody vines.
10		5		FACW	approximately 20 ft (6 m) or more in height and 3 in.
12	10				
Saulina Stratum	12.				than 3 in. (7.6 cm) DBH.
Sapling Stratum		88	=Total Cover		Shrub - Woody Plants, excluding woody vines,
Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size and woody plants. including herbaceous vines, regardless of size and woody plants, scopt woody vines, less than approximately 3 ft (1 m) in height.   Woody Vine - All woody vines, regardless of height.	50% of total cover: <b>44.</b> (			17.60	
7.					Harb All harbacoous (non woody) plants, including
8.   plants, except woody vines, less than approximately 3 it (1 m) in height.  Woody Vine - All woody vines, regardless of height.    Shrub Stratum					
9.					plants, except woody vines, less than approximately 3
10.	0				ft (1 m) in height.
11.					Woody Vine – All woody vines, regardless of height.
12.     35					
35					
Shrub Stratum   30 ft r   7. Liriodendron tulipifera   FACU   8.   9.		35	=Total Cover		
7. Liriodendron tulipifera  8. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9.	50% of total cover: 17.5	20%	of total cover:	7.00	
8. 9. 9. 10. 10. 11. 12. 34 =Total Cover 50% of total cover: 17.00 20% of total cover: 6.80    Herb Stratum 12. 13.	Shrub Stratum 30 ft r				
8. 9. 10. 11. 12:  34 =Total Cover  50% of total cover: 17.00 20% of total cover: 6.80  Herb Stratum 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 21. 22. 30 of total cover: 62.00 20% of total cover: 24.80  Woody Vine Stratum 6. 7. 8. 9. 10.  14 =Total Cover 50% of total cover: 2.80	7. Liriodendron tulipifera			FACU	
9.					
10. 11. 12.  34 =Total Cover 50% of total cover: 17.00 20% of total cover: 6.80  Herb Stratum 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22.  124 =Total Cover 50% of total cover: 62.00 20% of total cover: 24.80  Woody Vine Stratum 6. 7. 8. 9. 10.  14 =Total Cover 50% of total cover: 7.00 20% of total cover: 2.80	•				
11.    34					
12.     34	11				
Solid Cover   17.00   20% of total cover   6.80	12				
Herb Stratum					
12	50% of total cover: 17.0	20%	of total cover:	6.80	
13. 14. 15. 16. 17. 18. 19. 20. 21. 22.  124 =Total Cover 50% of total cover: 62.00 20% of total cover: 24.80  Woody Vine Stratum 6. 7. 8. 9. 10. 14 =Total Cover 50% of total cover: 7.00 20% of total cover: 2.80	Herb Stratum				
14. 15. 16. 17. 18. 19. 20. 21. 22.  124 =Total Cover  50% of total cover: 62.00 20% of total cover: 24.80  Woody Vine Stratum 6. 7. 8. 9. 10. 14 =Total Cover  50% of total cover: 7.00 20% of total cover: 2.80	12				
15.	13				
16					
17.	15				
18.	16				
19					
20. 21. 22.  124 =Total Cover 50% of total cover: 62.00 20% of total cover: 24.80  Woody Vine Stratum 6. 7. 8. 9. 10. 14 =Total Cover 50% of total cover: 7.00 20% of total cover: 2.80					
21					
22		-			
124					
50% of total cover: 62.00 20% of total cover: 24.80  Woody Vine Stratum 6.	22	10.4			
Woody Vine Stratum         6.         7.         8.         9.         10.         50% of total cover:       7.00         20% of total cover:       2.80	500/ of total account <b>62</b> /			24.00	
6		JU 20%	or total cover:	24.60	
7.  8.  9.  10.  50% of total cover: 7.00  20% of total cover: 2.80	<del></del>				
8					
9		-			
10					
14         =Total Cover           50% of total cover:         7.00         20% of total cover:         2.80					
50% of total cover: 7.00 20% of total cover: 2.80	10.	14	-Total Cover		
	50% of total cover: 7 00			2.80	
			, or total cover.	2.00	

Sampling Point: DP-9

Profile Desc	ription: (Describe	to the de	pth needed to docu	ıment t	he indica	ator or c	onfirm the absence	of indicators.)			
Depth	Matrix		Redo	x Featur	res						
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks			
0 - 6	2.5Y 4/2	100					Loamy Sand				
6 - 16	2.5Y 5/2	80	7.5YR 5/3	20	С	PL / M	Silty Clay				
16 - 24	2.5Y 6/2	80	10YR 6/6	20	С	М	Sandy Clay Loam				
-											
-											
-											
-											
<sup>1</sup> Type: C=Co	ncentration, D=Depl	etion, RM	M=Reduced Matrix, N	 ∕/S=Mas	ked San	d Grains	<sup>2</sup> Location:	PL=Pore Lining, M=Matrix.			
			LRRs, unless other					for Problematic Hydric Soils <sup>3</sup> :			
Histosol			Thin Dark Su			S, T, U)		luck (A9) <b>(LRR O)</b>			
Histic Ep	ipedon (A2)		Barrier Island			-		luck (A10) <b>(LRR S)</b>			
Black His			(MLRA 15			,		Prairie Redox (A16)			
Hvdrogei	n Sulfide (A4)		Loamy Muck	•	•	RR O)		side MLRA 150A)			
	Layers (A5)		Loamy Gleye	•	· , •		•	ed Vertic (F18)			
	Bodies (A6) (LRR P,	T. U)	✓ Depleted Ma					side MLRA 150A, 150B)			
_	cky Mineral (A7) <b>(LR</b>	-		, ,			•	ont Floodplain Soils (F19) (LRR P, T)			
	esence (A8) (LRR U)		Depleted Da		` '			lous Bright Floodplain Soils (F20)			
	` ' ' '	,			` ,			• , ,			
	ck (A9) (LRR P, T)	(111)	Redox Depre		(FO)		· · · · · · · · · · · · · · · · · · ·	RA 153B)			
-	Below Dark Surface	e (A11)	Marl (F10) <b>(L</b>	-	4) <b>(14)</b> D			arent Material (F21)			
	rk Surface (A12)		Depleted Oc			-		hallow Dark Surface (F22)			
	airie Redox (A16) (N	ILRA 150	-					outside MLRA 138, 152A in FL, 154)			
	osulfide (A18)		Umbric Surfa			-	Other (	Explain in Remarks)			
Sandy M	ucky Mineral (S1) <b>(L</b>	RR O, S)	Delta Ochric	(F17) <b>(I</b>	MLRA 15	51)					
Sandy G	eyed Matrix (S4)		Reduced Ve	•			,	tors of hydrophytic vegetation and			
Sandy R	edox (S5)		Piedmont Flo	oodplain	Soils (F	19) <b>(MLF</b>	RA 149A)				
Stripped	Matrix (S6)		Anomalous E	3right Fl	oodplain	Soils (F2	20)				
Dark Sur	face (S7) <b>(LRR P, S</b>	, T, U)	(MLRA 14	9A, 153	C, 153D	)					
Polyvalue	e Below Surface (S8	)	Very Shallow	v Dark S	Surface (F	<del>-</del> 22)	wetla	and hydrology must be present,			
(LRR S	S, T, U)		(MLRA 13	8, 152A	in FL, 1	54)	unless disturbed or problematic.				
	ayer (if observed):										
Type:								_			
Depth (in	ches):						Hydric Soil Prese	ent? Yes V No No			
Remarks:											
Hydric s	oil indicator l	=3 ob	served								
	on maioator i	0 00.	oor vou.								



Photograph 17: View of forested wetlands at Data Point 9.



Photograph 18: View of hydric soil profile at Data Point 9.

# WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Franklin - Kister Tract	City/County: <b>Greensville County</b> Sampling Date: 2025-05-12
Applicant/Owner: Otterdam Technology Group, LLC	State: Virginia Sampling Point: DP-10
Investigator(s): Nikolai Karlov, Jackson Livingstone, Jillian Burgan, WSSI Sec	
Landform (hillside, terrace, etc.): Side Slope Local r	relief (concave, convex, none): Linear Slope (%): 5
Subregion (LRR or MLRA): P 133A Lat: 36.801438	Long: -77.511554 Datum: NAD 83
Soil Map Unit Name: 36B - Uchee loamy sand, 0 to 6 perce	
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 disturi	
Are Vegetation, Soil, or Hydrology naturally problems	
<del></del>	npling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ✔ No	Is the Sampled Area
Hydric Soil Present? Yes No	within a Wetland? Yes No
Wetland Hydrology Present? Yes No	
Remarks: Data point taken on a side slope which grades	down into adjacent swamp system. Data point
	I growth dominated by pine saplings as a result
of former silvicultural activities. Conditions we	etter than normal for this time of year.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)  Marl Deposits (B15) (LR	
Saturation (A3) Hydrogen Sulfide Odor (	
Water Marks (B1) Oxidized Rhizospheres	on Living Roots (C3) Dry-Season Water Table (C2)
Sediment Deposits (B2) Presence of Reduced Iron	on (C4) Crayfish Burrows (C8)
Drift Deposits (B3) Recent Iron Reduction in	n Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Thin Muck Surface (C7)	Geomorphic Position (D2)
Iron Deposits (B5) Other (Explain in Remar	ks) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)
I	
Water-Stained Leaves (B9)	Sphagnum Moss (D8) (LRR T, U)
Water-Stained Leaves (B9) Field Observations:	
Water-Stained Leaves (B9)  Field Observations:  Surface Water Present? Yes No Depth (inches):	
Water-Stained Leaves (B9)  Field Observations:  Surface Water Present? Yes No Depth (inches):  Water Table Present? Yes Depth (inches):	
Water-Stained Leaves (B9)  Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches):	
Water-Stained Leaves (B9)  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 _ ✓
Water-Stained Leaves (B9)  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)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, presents)	Wetland Hydrology Present? Yes No _ ✓
Water-Stained Leaves (B9)  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 _ ✓
Water-Stained Leaves (B9)  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)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, presents)	Wetland Hydrology Present? Yes No _ ✓
Water-Stained Leaves (B9)  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)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, properties of the pro	Wetland Hydrology Present? Yes No _ ✓
Water-Stained Leaves (B9)  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)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, properties of the pro	Wetland Hydrology Present? Yes No _ ✓
Water-Stained Leaves (B9)  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)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, properties of the pro	Wetland Hydrology Present? Yes No _ ✓
Water-Stained Leaves (B9)  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)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, properties of the pro	Wetland Hydrology Present? Yes No _ ✓
Water-Stained Leaves (B9)  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)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	Wetland Hydrology Present? Yes No _ ✓
Water-Stained Leaves (B9)  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)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	Wetland Hydrology Present? Yes No _ ✓
Water-Stained Leaves (B9)  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)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, present of the process of t	Wetland Hydrology Present? Yes No _ ✓
Water-Stained Leaves (B9)  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)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	Wetland Hydrology Present? Yes No _ ✓

**VEGETATION (Five Strata)** – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1.				Number of Dominant Species
2.				That Are OBL, FACW, or FAC: 2 (A)
3. 4.				Total Number of Dominant Species Across All Strata: 2 (B)
5				(,
6.				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)
		=Total Cover		Prevalence Index worksheet:
50% of total cover:	20%	of total cover:		Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 30 ft r )				OBL species 0 x 1 = 0
1.				FACW species 5 x 2 = 10
2.				FAC species 116 x 3 = 348
3.				FACU species 24 x 4 = 96
4.				UPL species 15 x 5 = 75
5.				Column Totals: 160 (A) 529 (B)
6.				Prevalence Index = B/A = 3.30
		=Total Cover		Hydrophytic Vegetation Indicators:
50% of total cover:		of total cover:		1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30 ft r )		or total cover.		✓ 2 - Dominance Test is >50%
1. Pinus taeda	35		E40	3 - Prevalence Index is ≤3.0 <sup>1</sup>
	8		FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
	6		FAC	Problematic Hydrophytic Vegetation (Explain)
	4		FACU	
4. Ilex opaca	4		FAC	
5. Acer rubrum	4		FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be
6.	57			present, unless disturbed or problematic.
	5/	=Total Cover		Definitions of Five Vegetation Strata:
4			11 10	
50% of total cover: 28	.50 20%	of total cover:	11.40	Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 30 ft r )				Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
Herb Stratum (Plot size: 30 ft r  1. Andropogon virginicus	60		FAC	Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 30 ft r )  1. Andropogon virginicus 2. Eupatorium capillifolium	60 15	of total cover:	FAC FACU	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,
Herb Stratum (Plot size: 30 ft r  1. Andropogon virginicus 2. Eupatorium capillifolium 3. Rubus flagellaris	60	of total cover:	FAC FACU UPL	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
Herb Stratum (Plot size: 30 ft r )  1. Andropogon virginicus 2. Eupatorium capillifolium 3. Rubus flagellaris 4. Pinus taeda	60 15	of total cover:	FACUUPL	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,
Herb Stratum (Plot size: 30 ft r )  1. Andropogon virginicus 2. Eupatorium capillifolium 3. Rubus flagellaris 4. Pinus taeda 5. Solidago gigantea	60 15 15	of total cover:	FAC FACU UPL FAC FACW	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,
Herb Stratum (Plot size: 30 ft r )  1. Andropogon virginicus 2. Eupatorium capillifolium 3. Rubus flagellaris 4. Pinus taeda	60 15 15 5	of total cover:	FACUUPL	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.
Herb Stratum (Plot size: 30 ft r )  1. Andropogon virginicus 2. Eupatorium capillifolium 3. Rubus flagellaris 4. Pinus taeda 5. Solidago gigantea	60 15 15 5 5	of total cover:	FAC FACU UPL FAC FACW	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,
Herb Stratum (Plot size: 30 ft r )  1. Andropogon virginicus 2. Eupatorium capillifolium 3. Rubus flagellaris 4. Pinus taeda 5. Solidago gigantea 6. Liriodendron tulipifera	60 15 15 5 5	of total cover:	FAC FACU UPL FAC FACW	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
Herb Stratum (Plot size: 30 ft r  1. Andropogon virginicus 2. Eupatorium capillifolium 3. Rubus flagellaris 4. Pinus taeda 5. Solidago gigantea 6. Liriodendron tulipifera 7.	60 15 15 5 5	of total cover:	FAC FACU UPL FAC FACW	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
Herb Stratum (Plot size: 30 ft r  1. Andropogon virginicus 2. Eupatorium capillifolium 3. Rubus flagellaris 4. Pinus taeda 5. Solidago gigantea 6. Liriodendron tulipifera 7. 8.	60 15 15 5 5	of total cover:	FAC FACU UPL FAC FACW	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.
Herb Stratum (Plot size: 30 ft r )  1. Andropogon virginicus 2. Eupatorium capillifolium 3. Rubus flagellaris 4. Pinus taeda 5. Solidago gigantea 6. Liriodendron tulipifera 7. 8. 9.	60 15 15 5 5	of total cover:	FAC FACU UPL FAC FACW	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
Herb Stratum (Plot size: 30 ft r )  1. Andropogon virginicus 2. Eupatorium capillifolium 3. Rubus flagellaris 4. Pinus taeda 5. Solidago gigantea 6. Liriodendron tulipifera 7. 8. 9. 10.	60 15 15 5 5 3	of total cover:	FAC FACU UPL FAC FACW	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.
Herb Stratum (Plot size: 30 ft r )  1. Andropogon virginicus 2. Eupatorium capillifolium 3. Rubus flagellaris 4. Pinus taeda 5. Solidago gigantea 6. Liriodendron tulipifera 7. 8. 9. 10.	60 15 15 5 5 3	of total cover:	FAC FACU UPL FAC FACW FACU	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.
Herb Stratum (Plot size: 30 ft r )  1. Andropogon virginicus 2. Eupatorium capillifolium 3. Rubus flagellaris 4. Pinus taeda 5. Solidago gigantea 6. Liriodendron tulipifera 7. 8. 9. 10. 11.	60 15 15 5 5 3	of total cover:	FAC FACU UPL FAC FACW FACU	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.
Herb Stratum (Plot size: 30 ft r )  1. Andropogon virginicus 2. Eupatorium capillifolium 3. Rubus flagellaris 4. Pinus taeda 5. Solidago gigantea 6. Liriodendron tulipifera 7. 8. 9. 10. 11. 50% of total cover: 51.	60 15 15 5 5 3	of total cover:	FAC FACU UPL FAC FACW FACU	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.
Herb Stratum (Plot size: 30 ft r )  1. Andropogon virginicus 2. Eupatorium capillifolium 3. Rubus flagellaris 4. Pinus taeda 5. Solidago gigantea 6. Liriodendron tulipifera 7. 8. 9. 10. 11. 50% of total cover: 51. Woody Vine Stratum (Plot size: 30 ft r )	60 15 15 5 5 3	of total cover:	FAC FACU UPL FAC FACW FACU	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.
Herb Stratum (Plot size: 30 ft r )  1. Andropogon virginicus 2. Eupatorium capillifolium 3. Rubus flagellaris 4. Pinus taeda 5. Solidago gigantea 6. Liriodendron tulipifera 7. 8. 9. 10. 11. 50% of total cover: 51. Woody Vine Stratum (Plot size: 30 ft r ) 1. 2.	60 15 15 5 5 3	of total cover:	FAC FACU UPL FAC FACW FACU	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.
Herb Stratum (Plot size: 30 ft r )  1. Andropogon virginicus 2. Eupatorium capillifolium 3. Rubus flagellaris 4. Pinus taeda 5. Solidago gigantea 6. Liriodendron tulipifera 7. 8. 9. 10. 11. 50% of total cover: 51. Woody Vine Stratum (Plot size: 30 ft r ) 1. 2	60 15 15 5 5 3	of total cover:	FAC FACU UPL FAC FACW FACU	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.
Herb Stratum (Plot size: 30 ft r )  1. Andropogon virginicus 2. Eupatorium capillifolium 3. Rubus flagellaris 4. Pinus taeda 5. Solidago gigantea 6. Liriodendron tulipifera 7. 8. 9. 10. 11. 50% of total cover: 51. Woody Vine Stratum (Plot size: 30 ft r ) 1. 2. 3. 4.	60 15 15 5 5 3	of total cover:	FAC FACU UPL FAC FACW FACU	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.
Herb Stratum (Plot size: 30 ft r )  1. Andropogon virginicus 2. Eupatorium capillifolium 3. Rubus flagellaris 4. Pinus taeda 5. Solidago gigantea 6. Liriodendron tulipifera 7. 8. 9. 10. 11. 50% of total cover: 51. Woody Vine Stratum (Plot size: 30 ft r ) 1. 2. 3.	60 15 15 5 5 3 103 50 20%	=Total Cover	FAC FACU UPL FAC FACW FACU	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.
Herb Stratum (Plot size: 30 ft r )  1. Andropogon virginicus 2. Eupatorium capillifolium 3. Rubus flagellaris 4. Pinus taeda 5. Solidago gigantea 6. Liriodendron tulipifera 7. 8. 9. 10. 11. 50% of total cover: 51. Woody Vine Stratum (Plot size: 30 ft r ) 1. 2. 3. 4. 5.	60 15 15 5 5 3 103 50 20%	=Total Cover	FAC FACU UPL FAC FACW FACU  20.60	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.  Hydrophytic Vegetation
Herb Stratum (Plot size: 30 ft r )  1. Andropogon virginicus 2. Eupatorium capillifolium 3. Rubus flagellaris 4. Pinus taeda 5. Solidago gigantea 6. Liriodendron tulipifera 7. 8. 9. 10. 11. 50% of total cover: 51. Woody Vine Stratum (Plot size: 30 ft r ) 1. 2. 3. 4.	60 15 15 5 5 3 103 50 20%	=Total Cover	FAC FACU UPL FAC FACW FACU  20.60	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.

Sampling Point: <u>DP-</u>10

# **VEGETATION Continued (Five Strata)** – Use scientific names of plants. Sampling Point: DP-10

Tree Stratum		Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Five Vegetation Strata:
					Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
2					(7.6 cm) or larger in diameter at breast height (DBH).
-					Sapling – Woody plants, excluding woody vines,
11.					approximately 20 ft (6 m) or more in height and less
12.					than 3 in. (7.6 cm) DBH.
			=Total Cover		Shrub - Woody Plants, excluding woody vines,
	50% of total cover:	20%	of total cover:		approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum					Herb – All herbaceous (non-woody) plants, including
7					herbaceous vines, regardless of size, <u>and</u> woody
					plants, except woody vines, less than approximately 3 ft (1 m) in height.
	_				Woody Vine – All woody vines, regardless of height.
					<b>Woody Vine</b> – All woody Vines, regardless of height.
10					
12			=Total Cover		
	50% of total cover:		of total cover:		
Shrub Stratum	30 ft r		or total bover.		
<u> </u>					
^					
٥		·			
40					
12					
			=Total Cover		
	50% of total cover: 28.5	<u>50</u> 20%	of total cover:	11.40	
Herb Stratum					
12.					
15 16.					
17.	_				
18.					
19.	_				
20.					
21.					
22.					
		103	=Total Cover		
	50% of total cover: 51.5	20%	of total cover:	20.60	
Woody Vine Stratum					
6					
7.	_				
8.					
9.					
10			Total Ores		
	50% of total cover:		=Total Cover of total cover:		
Domarka: (If about 1			or total cover:		
Remarks: (If observed, II	st morphological adaptatio	ris below.)			

	ription: (Describe	to the dept				tor or c	onfirm the	absence of	indicators.)		
Depth	Matrix			x Featu		. 2	_		5		
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		ture	Rer	narks	
0 - 3	10YR 4/1	100					Sandy	Loam			
3 - 24	10YR 6/3	100					Loamy	Sand			
		· <u> </u>	_							_	
		· ·									
-											
	ncentration, D=Dep					Grains.			_=Pore Lining, M=		
-	ndicators: (Applica	ible to all L			-	O T III			r Problematic Hy	ydric Soils <sup>3</sup> :	
Histosol (			Thin Dark Su			-			ck (A40) (LRR O)		
Black His	ipedon (A2)		Barrier Island (MLRA 15			12)			ck (A10) <b>(LRR S)</b> airie Redox (A16)		
	n Sulfide (A4)		Loamy Muck		-	RR O)	_		le MLRA 150A)		
	Layers (A5)		Loamy Gleye	-		0,		-	Vertic (F18)		
	Bodies (A6) (LRR P,	T, U)	Depleted Ma				-		le MLRA 150A, 1	50B)	
5 cm Mud	cky Mineral (A7) <b>(LR</b>	R P, T, U)	Redox Dark	Surface	(F6)		=	Piedmon	t Floodplain Soils	(F19) <b>(LRR P, T)</b>	
Muck Pre	esence (A8) (LRR U	)	Depleted Da	rk Surfa	ice (F7)		_	Anomalo	us Bright Floodpla	ain Soils (F20)	
1 cm Mud	ck (A9) (LRR P, T)		Redox Depre	essions	(F8)		(MLRA 153B)				
-	Below Dark Surface	e (A11)	Marl (F10) <b>(L</b>	-				— Red Parent Material (F21)			
	rk Surface (A12)		Depleted Oc			-		Very Shallow Dark Surface (F22)			
	airie Redox (A16) (N	ILRA 150A			,						
	osulfide (A18) ucky Mineral (S1) <b>(L</b>	PP () S)	Umbric Surfa  Delta Ochric	•	, ,		-	Other (Explain in Remarks)			
-	eyed Matrix (S4)	.KK 0, 3)	Reduced Ve			•	50B)	<sup>3</sup> Indicator	s of hydrophytic v	regetation and	
Sandy Re			Piedmont Flo	•			•	mulcator	3 of Hydrophytic V	regetation and	
-	Matrix (S6)		Anomalous E				-				
Dark Sur	face (S7) (LRR P, S	, T, U)	(MLRA 14	9A, 153	C, 153D)						
	e Below Surface (S8	)	Very Shallow	Dark S	Surface (F	22)	wetland hydrology must be present,				
(LRR S	S, T, U)		(MLRA 13	8, 152A	in FL, 1	54)	unless disturbed or problematic.				
Restrictive L	ayer (if observed):										
Type:											
Depth (in	ches):						Hydric	Soil Presen	t? Yes	No	
Remarks:											
Hydric s	oil indicators	not ob	served.								



Photograph 19: View of uplands at Data Point 10.



Photograph 20: View of non-hydric soil profile at Data Point 10.

# WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Franklin - Kistler Tract	City/County: Greensville County Sampling Date: 2025-04-28				
Applicant/Owner: Otterdam Technology Group, LLC	State: Virginia Sampling Point: DP-11				
Investigator(s): Nikolai Karlov, Jackson Livingstone, Jillian Burgan, WSSI Sec	tion, Township, Range:				
Landform (hillside, terrace, etc.): Seep Local r	relief (concave, convex, none): None Slope (%): 0				
Subregion (LRR or MLRA): P 133A Lat: 36.802444	Long: -77.513792 Datum: NAD 83				
Soil Map Unit Name: 40A - Woodington fine sandy loam, 0	·				
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 disturb					
<del></del> <del></del>					
Are Vegetation, Soil, or Hydrology naturally problems  SUMMARY OF FINDINGS – Attach site man showing sam	atic? (If needed, explain any answers in Remarks.)  npling point locations, transects, important features, etc.				
	Is the Sampled Area				
	within a Wetland? Yes No No				
Wetland Hydrology Present? Yes   ✓ No  Remarks:					
Data point sampled in a shrub/scrub wetland lo	ocated within a broader seep and drainage				
system. The area appeared to have been cut-	over within the past several years. Conditions				
wetter than normal for this time of year.					
HYDROLOGY					
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)				
Surface Water (A1) Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2)  Marl Deposits (B15) (LR					
Saturation (A3) Hydrogen Sulfide Odor (					
Water Marks (B1) Oxidized Rhizospheres o					
Sediment Deposits (B2)  Presence of Reduced Iro					
Drift Deposits (B3) Recent Iron Reduction in					
Algal Mat or Crust (B4)  V Thin Muck Surface (C7)	Geomorphic Position (D2)				
Iron Deposits (B5) Other (Explain in Remark					
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)				
Water-Stained Leaves (B9)	Sphagnum Moss (D8) (LRR T, U)				
Field Observations:					
Surface Water Present? Yes V No Depth (inches):					
Water Table Present? Yes ✓ No Depth (inches):					
Saturation Present? Yes No Depth (inches): (includes capillary fringe)	0 Wetland Hydrology Present? Yes V No				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	evious inspections) if available:				
Dosolibo Nosoridos Data (Strouiri gaago, monitoring from acris. p. 15.55, p.	evious inspections, in available.				
Remarks:					
har et al. I i i i i i i i i i i i i i i i i i i					
Wetland hydrology indicators observed.					

<b>EGETATION (Five Strata)</b> – Use sci		•		Sampling Point: DP-11
Γree Stratum (Plot size: 30 ft r	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
l. 2.				Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
3. I.				Total Number of Dominant Species Across All Strata: 4 (B)
5.				Percent of Dominant Species
5.				That Are OBL, FACW, or FAC: 100.00 (A/B)
		=Total Cover	1	Prevalence Index worksheet:
50% of total cover:	20%	of total cover	;r:	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 30 ft r )	_		_	OBL species <u>26</u> x 1 = <u>26</u>
1.				FACW species 51 x 2 = 102
2.				FAC species 68 x 3 = 204
3.	<u> </u>	<u>-</u>		FACU species 0 x 4 = 0
4.				UPL species $0   x 5 = 0$
5.				Column Totals: 145 (A) 332 (B)
6.				Prevalence Index = B/A = 2.28
		=Total Cover	<u></u>	Hydrophytic Vegetation Indicators:
50% of total cover:	20%	of total cover	er:	Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30 ft r )				✓ 2 - Dominance Test is >50%
1. Pinus taeda	30	~	FAC	3 - Prevalence Index is ≤3.0 <sup>1</sup>
2. Liquidambar styraciflua	4		FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Morella cerifera	3		FAC	
4.			17.0	
5.				4
6.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must b present, unless disturbed or problematic.
6.	37	=Total Cover	. ——	,
EON of total covers				Definitions of Five Vegetation Strata:
50% of total cover:	18.50 2070	of total cover	r: <u>/.40</u>	Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 30 ft r )	- <del>-</del>			approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
Andropogon glomeratus	45		FACW	
2. Rubus pensilvanicus	20		FAC	Sapling – Woody plants, excluding woody vines,
3. Juncus effusus	<u>15</u>		OBL	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
4. Scirpus cyperinus	8		OBL	, , ,
5. Rhexia mariana	<u>6</u>		FACW	Shrub - Woody Plants, excluding woody vines,
6. Eupatorium serotinum	4		FAC	approximately 3 to 20 ft (1 to 6 m) in height.
7. Saururus cernuus	3		OBL	Herb – All herbaceous (non-woody) plants, including
8. Athyrium asplenioides	2		FAC	herbaceous vines, regardless of size, <u>and</u> woody
9.				plants, except woody vines, less than approximately 3
10.	_			ft (1 m) in height.
11.				Woody Vine – All woody vines, regardless of height.
	103	=Total Cover	r	
50% of total cover:		of total cover		
Woody Vine Stratum (Plot size: 30 ft r	1 20,0	01 10101 0010	1	
Smilax rotundifolia	_ <i>'</i> 5	~	FAC	
			FAC	
2				
3.	<del>_</del>		. ——	
4				
5				Hydrophytic
	5 .	=Total Cover	,	Vegetation
50% of total cover:		of total cover		Present? Yes No

# **VEGETATION Continued (Five Strata)** – Use scientific names of plants. Sampling Point: DP-11

Tree Stratum		Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Five Vegetation Strate:
<del></del>		% Cover	Species?	Status	Definitions of Five Vegetation Strata:
0					Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
0					(7.6 cm) or larger in diameter at breast height (DBH).
					Sapling – Woody plants, excluding woody vines,
11.					approximately 20 ft (6 m) or more in height and less
12.					than 3 in. (7.6 cm) DBH.
			=Total Cover		Shrub - Woody Plants, excluding woody vines,
	50% of total cover:	20%	of total cover:		approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum					Herb – All herbaceous (non-woody) plants, including
7.					herbaceous vines, regardless of size, and woody
0					plants, except woody vines, less than approximately 3 ft (1 m) in height.
9.					
					Woody Vine – All woody vines, regardless of height.
11					
12					
			=Total Cover		
	50% of total cover:	20%	of total cover:		
Shrub Stratum	30 ft r				
12.	_	37 =	Total Cover		
	50% of total cover: <b>18.5</b>		of total cover:	7.40	
Herb Stratum					
13.					
15.					
16.					
17					
19					
21					
22		100			
			=Total Cover	20.00	
W 1 V' 0: 1	50% of total cover: <u>51.5</u>	<u>0</u> 20%	of total cover:	20.60	
Woody Vine Stratum					
6. 7.					
ρ					
9.					
10.					
		5 :	=Total Cover		
	50% of total cover: 2.50		of total cover:	1.00	
Remarks: (If observed 1	ist morphological adaptation				
		,			

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	. Matrix		-	x Featu				,
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 4	10YR 3/1	100					Mucky Loam/Clay	
4 - 6	10YR 5/1	94	10YR 5/6	6	С	PL / M	Silt Loam	
6 - 15	10YR 6/3	92	10YR 5/6	8	С	PL / M	Sand	
15 - 20	10YR 6/2	92	10YR 5/6	8	С	PL / M	Sandy Loam	
20 - 24	10YR 5/1	100					Sand	
-								
¹Type: C=Co	ncentration, D=Depl	etion, RN	/=Reduced Matrix, I	MS=Mas	ked San	d Grains	. <sup>2</sup> Location:	PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Applica	ble to al	I LRRs, unless other	erwise r	oted.)		Indicators	for Problematic Hydric Soils <sup>3</sup> :
Histosol (	(A1)		Thin Dark S	urface (S	9) <b>(LRR</b>	S, T, U)	1 cm M	luck (A9) (LRR O)
Histic Epi	ipedon (A2)		Barrier Islan	ds 1 cm	Muck (S	12)	2 cm M	fuck (A10) <b>(LRR S)</b>
Black His	stic (A3)		(MLRA 15	53B, 153	D)		Coast I	Prairie Redox (A16)
Hydroger	n Sulfide (A4)		Loamy Mucl	ky Miner	al (F1) <b>(L</b>	.RR O)	(outs	side MLRA 150A)
Stratified	Layers (A5)		Loamy Gley	ed Matri	x (F2)		Reduce	ed Vertic (F18)
Organic I	Bodies (A6) (LRR P,	T, U)	✓ Depleted Ma	atrix (F3)	)		(outs	side MLRA 150A, 150B)
<u>✓</u> 5 cm Mud	cky Mineral (A7) (LR	R P, T, L	J) Redox Dark	Surface	(F6)		Piedmo	ont Floodplain Soils (F19) (LRR P, T)
Muck Pre	esence (A8) (LRR U)	1	Depleted Da	ark Surfa	ce (F7)		Anoma	llous Bright Floodplain Soils (F20)
1 cm Mud	ck (A9) (LRR P, T)		Redox Depr	essions	(F8)		(MLR	RA 153B)
	Below Dark Surface	(A11)	Marl (F10) (	LRR U)	` ,		· · · · · · · · · · · · · · · · · · ·	arent Material (F21)
-	rk Surface (A12)	,	Depleted Oc	-	1) <b>(MLR</b> /	A 151)		hallow Dark Surface (F22)
	airie Redox (A16) ( <b>M</b>	LRA 150				-	•	outside MLRA 138, 152A in FL, 154)
	osulfide (A18)		Umbric Surf					Explain in Remarks)
	ucky Mineral (S1) <b>(L</b>	RR O. S					`	,
-	leyed Matrix (S4)		Reduced Ve			-	50B) <sup>3</sup> Indica	tors of hydrophytic vegetation and
Sandy Re			Piedmont FI	•			,	toro or regulation and
-	Matrix (S6)		Anomalous	•	•	, ,	•	
	face (S7) <b>(LRR P, S</b> ,	T, U)	(MLRA 14	-			,	
	e Below Surface (S8)		Very Shallov				wetla	and hydrology must be present,
(LRR S, T, U) (MLRA 138, 152A in FL, 154)						unless disturbed or problematic.		
Restrictive L	ayer (if observed):							
Type:								
Depth (in	ches):						Hydric Soil Prese	ent? Yes <u>/</u> No
Remarks:								
Hydric s	oil indicators	A7 aı	nd F3 observ	ed.				
,								



Photograph 21: View of scrub/shrub wetlands at Data Point 11.



Photograph 22: View of hydric soil profile at Data Point 11.

# WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Franklin - Kister Tract	City/County: Greensville County Sampling Date: 2025-05-12						
Applicant/Owner: Otterdam Technology Group, LLC	State: Virginia Sampling Point: DP-12						
Investigator(s): Nikolai Karlov, Jackson Livingstone, Jillian Burgan, WSSI Sec	ction, Township, Range:						
Landform (hillside, terrace, etc.): Side Slope Local	relief (concave, convex, none): Linear Slope (%): 5						
Subregion (LRR or MLRA): P 133A Lat: 36.802943	Long: -77.513443 Datum: NAD 83						
Soil Map Unit Name: 40A - Woodington fine sandy loam, 0							
Are climatic / hydrologic conditions on the site typical for this time of year?							
Are Vegetation, Soil, or Hydrology significantly distur							
Are Vegetation, Soil, or Hydrologynaturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.							
	ilpling point locations, transects, important reatures, etc.						
Hydrophytic Vegetation Present?  Yes No	Is the Sampled Area						
Hydric Soil Present? Yes No	within a Wetland? Yes No						
Wetland Hydrology Present? Yes No							
Remarks: Data point taken on side slope above wet drain	nageway. Data point located in an area of early						
to mid-successional growth following previous	s silviculture activities. Conditions wetter than						
normal for this time of year.							
HYDROLOGY							
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)						
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)						
Surface Water (A1) Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)						
High Water Table (A2) Marl Deposits (B15) (LR	RR U) Drainage Patterns (B10)						
Saturation (A3) Hydrogen Sulfide Odor							
Water Marks (B1) Oxidized Rhizospheres							
Sediment Deposits (B2)  Presence of Reduced In							
Drift Deposits (B3) Recent Iron Reduction in							
Algal Mat or Crust (B4)  Thin Muck Surface (C7)	<del></del>						
Iron Deposits (B5) Other (Explain in Remar							
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)						
Water-Stained Leaves (B9)	Sphagnum Moss (D8) (LRR T, U)						
Field Observations:							
Surface Water Present? Yes No Depth (inches):							
Water Table Present? Yes No Depth (inches):							
Saturation Present? Yes No V Depth (inches):	: Wetland Hydrology Present? Yes No						
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, p.	revious inspections) if available:						
Dodolibo Nooridod Data (official) gaage, memering from dollar prister, p.	Tovious inspections, it available.						
Remarks:							
Wetland hydrology indicators not observed.							
Welland Hydrology maleators not observed.							
	J						

**VEGETATION (Five Strata)** – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1 2.				Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
				(
3				Total Number of Dominant Species Across All Strata: 4 (B)
5.				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 50.00 (A/B)
	:	=Total Cover		Prevalence Index worksheet:
50% of total cover:	20%	of total cover:		Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 30 ft r )				OBL species 0 x 1 = 0
1				FACW species 0
2.				FAC species 105 x 3 = 315
3.				FACU species $55$ $x 4 = 220$
4.				UPL species $0   x 5 = 0$
				Column Totals: 160 (A) 535 (B)
5 6.				Prevalence Index = B/A = 3.34
·		=Total Cover		Hydrophytic Vegetation Indicators:
50% of total cover:		of total cover:		1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30 ft r )		o. total cover.		2 - Dominance Test is >50%
1. Pinus taeda	40	~	FAC	3 - Prevalence Index is ≤3.0¹
2. Liquidambar styraciflua	7			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Acer rubrum	5		FAC	Problematic Hydrophytic Vegetation (Explain)
	5		FAC	
	5		FACU	
	4		<u></u>	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be
6. Ulmus alata			FACU	present, unless disturbed or problematic.
		=Total Cover	10.00	Definitions of Five Vegetation Strata:
50% of total cover: 33.0	20%	of total cover:	13.20	Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 30 ft r )				approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
1. Andropogon virginicus	30		FAC	(7.0 cm) or larger in diameter at breast height (DBH).
2. Eupatorium capillifolium	25		FACU	Sapling – Woody plants, excluding woody vines,
3. Rubus pensilvanicus	15		FAC	approximately 20 ft (6 m) or more in height and less
4. Lonicera japonica	15		FACU	than 3 in. (7.6 cm) DBH.
5. Liquidambar styraciflua	5		FAC	Shrub - Woody Plants, excluding woody vines,
6. Pinus taeda	3		FAC	approximately 3 to 20 ft (1 to 6 m) in height.
7				<b>Herb</b> – All herbaceous (non-woody) plants, including
8.				herbaceous vines, regardless of size, and woody
9.				plants, except woody vines, less than approximately 3
10.				ft (1 m) in height.
11.				Woody Vine - All woody vines, regardless of height.
	93	=Total Cover		
50% of total cover: <b>46.5</b>		of total cover:	18.60	
Woody Vine Stratum (Plot size: 30 ft r )		o. total cover.		
Lonicera japonica	6	~	FACU	
2.			TAGO	
3.				
4				
5				Hydrophytic
2.00		=Total Cover	1 20	Vegetation
50% of total cover: 3.00		of total cover:	1.20	Present? Yes No No
Remarks: (If observed, list morphological adaptation	ns below.)			

Sampling Point: <u>DP-</u>12

Tree Stratum		Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Five Vegetation Strata:
7					Tree – Woody plants, excluding woody vines,
8. 9.					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,
11					approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
_	_		=Total Cover		Shrub - Woody Plants, excluding woody vines,
	50% of total cover:	20%	of total cover:		approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum					Herb – All herbaceous (non-woody) plants, including
					herbaceous vines, regardless of size, <u>and</u> woody plants, except woody vines, less than approximately 3
•					ft (1 m) in height.
					Woody Vine - All woody vines, regardless of height.
	_				
			=Total Cover		
Charle Ctuatura	50% of total cover:	20%	of total cover:		
Shrub Stratum 7	30 ft r				
0					
11					
12					
	50% of total cover: 33.0		=Total Cover of total cover:	13 20	
Herb Stratum	5070 of total cover	2070	or total cover.		
13.					
4.4					
<u> </u>					
16 17.					
18.					
19.					
20.					
21					
22.		93	T-1-1 0		
	50% of total cover: <b>46.5</b>		=Total Cover of total cover:	18 60	
Woody Vine Stratum		2070	or total cover.		
•					
7.					
8					
•					
10.		6	=Total Cover		
	50% of total cover: 3.00		of total cover:	1.20	
Remarks: (If observed, I	ist morphological adaptation				1

Profile Desc	ription: (Describe t	o the depth	needed to docu	ıment tl	he indica	tor or c	onfirm the absenc	e of indic	ators.)		
Depth	Matrix		Redo	x Featur							
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Rem	arks	
0 - 3	10YR 4/2	100					Loam	No re	dox obser	ved.	
3 - 18	10YR 6/6	100					Sandy Loam	_			
18 - 24	10YR 6/4	100					Loamy Sand				
-											
-											
-											
-								_			
¹Type: C=Co	oncentration, D=Depl	etion, RM=R	educed Matrix, N	//S=Mas	ked Sand	Grains	<sup>2</sup> Location	: PL=Pore	Lining, M=N	/latrix.	
Hydric Soil I	ndicators: (Applica	ble to all LR	Rs, unless other	rwise n	oted.)		Indicato	rs for Prob	olematic Hyd	dric Soils <sup>3</sup>	:
Histosol	(A1)	_	Thin Dark Su	urface (S	9) <b>(LRR</b>	S, T, U)	1 cm	Muck (A9	(LRR 0)		
Histic Ep	ipedon (A2)	-	Barrier Island	ds 1 cm	Muck (S	12)	2 cm	Muck (A1	0) (LRR S)		
Black His	stic (A3)		(MLRA 15	3B, 153	D)		Coas	st Prairie R	edox (A16)		
Hydrogei	n Sulfide (A4)	_	Loamy Muck	y Miner	al (F1) <b>(L</b>	RR O)	(01	ıtside MLF	RA 150A)		
Stratified	Layers (A5)	_	Loamy Gleye	ed Matri	x (F2)		Redu	uced Vertic	(F18)		
Organic I	Bodies (A6) (LRR P,	T, U)	Depleted Ma	trix (F3)			(oı	ıtside MLF	RA 150A, 15	0B)	
5 cm Mu	cky Mineral (A7) (LR	R P, T, U)	Redox Dark	Surface	(F6)		Pied	mont Flood	dplain Soils (I	=19) <b>(LRR</b>	P, T)
Muck Pre	esence (A8) (LRR U)	_	Depleted Da	rk Surfa	ce (F7)		Anor	nalous Brig	ght Floodplai	n Soils (F2	0)
1 cm Mu	ck (A9) (LRR P, T)	_	Redox Depre	essions	(F8)		(M	(MLRA 153B)			
Depleted	Below Dark Surface	(A11)	Marl (F10) <b>(L</b>	.RR U)			Red	Parent Ma	terial (F21)		
Thick Da	rk Surface (A12)	_	Depleted Oc	hric (F1	1) <b>(MLR</b> A	151)	Very	Shallow D	ark Surface	(F22)	
Coast Pr	airie Redox (A16) ( <b>M</b>	LRA 150A)	Iron-Mangar	ese Ma	sses (F12	2) (LRR	O, P, T)	(outside	MLRA 138, 1	52A in FL	., 154)
Iron Mon	osulfide (A18)	_	Umbric Surfa	ace (F13	3) (LRR P	, T, U)	Other (Explain in Remarks)				
Sandy M	ucky Mineral (S1) (L	RR O, S)	Delta Ochric	(F17) <b>(</b> I	MLRA 15	1)					
Sandy G	leyed Matrix (S4)	_	Reduced Ve	rtic (F18	) (MLRA	150A, 1	<b>50B)</b> <sup>3</sup> Indi	cators of h	ydrophytic ve	getation a	nd
Sandy R	edox (S5)	_	Piedmont Flo	oodplain	Soils (F	9) <b>(MLF</b>	RA 149A)				
Stripped	Matrix (S6)	_	Anomalous I	Bright Fl	oodplain	Soils (F2	20)				
Dark Sur	face (S7) (LRR P, S,	T, U)	(MLRA 14	9A, 153	C, 153D)						
Polyvalue	e Below Surface (S8)	_	Very Shallov	/ Dark S	Surface (F	22)	We	etland hydr	ology must b	e present,	
(LRR S	S, T, U)	-	(MLRA 13	8, 152A	in FL, 1	54)	unless disturbed or problematic.				
	ayer (if observed):										
Type:											
	iches):						Hydric Soil Pre	esent?	Yes	No_ <u>•</u>	
Remarks:											
Hydric s	oil indicators	not obs	served.								



Photograph 23: View of uplands at Data Point 12.



Photograph 24: View of non-hydric soil profile at Data Point 12.

## WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Franklin - Kistler Tr	act Cir	ity/County: Greensy	ille County	Sampling Date: 2025-04-29		
Applicant/Owner: Otterdam Technology				Sampling Point: DP-13		
Investigator(s): Nikolai Karlov, Jackson Livingsto	ne, Jillian Burgan, WSSI Section	n, Township, Range:		<u> </u>		
Landform (hillside, terrace, etc.): Seep		ef (concave, convex, r	none): <b>None</b>	Slope (%): <b>4</b>		
Subregion (LRR or MLRA): P 133A		Long: -		Datum: NAD 83		
Soil Map Unit Name: 40A - Woodington						
Are climatic / hydrologic conditions on the site ty	pical for this time of year?	Yes	No (If no, e	xplain in Remarks.)		
Are Vegetation, Soil, or Hydrolog	Jysignificantly disturbed	d? Are "Normal Ci	ircumstances" present?	Yes V No		
Are Vegetation, Soil, or Hydrolog	· · · · · · · · · · · · · · · · · · ·		olain any answers in Re	marks.)		
SUMMARY OF FINDINGS – Attach s			-			
Hydrophytic Vegetation Present? Ye	es No Ist	the Sampled Area				
, , , ,	<del></del>	ithin a Wetland?	Yes 🗸	No		
,	es No No					
Remarks: Data point sampled in a shrub			hroader arour	adwater seen that		
•			•	•		
extends up a gradual slope. C	conditions wetter th	nan normal to	r this time of y	ear.		
HYDROLOGY						
Wetland Hydrology Indicators:			Secondary Indicators (	minimum of two required)		
Primary Indicators (minimum of one is required	d; check all that apply)		Surface Soil Crack	(S (B6)		
Surface Water (A1)	Aquatic Fauna (B13)		Sparsely Vegetate	ed Concave Surface (B8)		
High Water Table (A2)	Marl Deposits (B15) (LRR U	U)	Drainage Patterns			
Saturation (A3)	Hydrogen Sulfide Odor (C1)					
Water Marks (B1)	Oxidized Rhizospheres on L					
Sediment Deposits (B2)	Presence of Reduced Iron (					
Drift Deposits (B3)	Recent Iron Reduction in Til	illed Soils (C6)		on Aerial Imagery (C9)		
Algal Mat or Crust (B4)	Thin Muck Surface (C7)	•	✓ Geomorphic Positi	= : : :		
Iron Deposits (B5)	Other (Explain in Remarks)		Shallow Aquitard (	` '		
Inundation Visible on Aerial Imagery (B7)	<del>_</del>	•	FAC-Neutral Test			
Water-Stained Leaves (B9)		•	Sphagnum Moss (	D8) (LRR T, U)		
Field Observations:			<del></del>			
Surface Water Present? Yes N	No Depth (inches):					
Water Table Present? Yes ✓ N	No Depth (inches): 10	<del></del>				
Saturation Present? Yes N	No Depth (inches): 3	Wetland F	Hydrology Present?	Yes V No		
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monit	toring well, aerial photos, previ-	ious inspections), if av	vailable:			
Remarks:						
Wetland hydrology indicators	observed.					

50% of total cover: 3.50

50% of total cover: 3.00

50% of total cover: 31.50

50% of total cover: 38.50

Tree Stratum (Plot size: 30 ft r )

Sapling Stratum (Plot size: 30 ft r )

Liquidambar styraciflua

Shrub Stratum (Plot size: 30 ft r

Rubus pensilvanicus

Ligustrum sinense

Herb Stratum (Plot size: 30 ft r

Athyrium asplenioides

Rhynchospora inexpansa

Woodwardia areolata

Rubus pensilvanicus

Carpinus caroliniana

Vitis rotundifolia

Lonicera japonica

Vitis rotundifolia

Lonicera japonica

Dioscorea villosa

ENG FORM 6116-2, SEP 2024

Smilax rotundifolia

11. Parthenocissus quinquefolia

Woody Vine Stratum (Plot size: 30 ft r )

llex opaca

Juncus effusus

Scirpus cyperinus

Clethra alnifolia

Betula nigra

llex opaca

Pinus taeda

Liriodendron tulipifera

1. Betula nigra

2.

3.

4.

5.

6.

3.

4.

5.

6.

1.

2.

3.

4

5.

6.

1.

2.

3.

4.

5.

6.

7.

8.

9.

2.

3.

4. 5. Absolute

% Cover

6

25

8

8

6

6

63

12

10

9

8

8

7

5

5

4

4

3 77

7

5

5

25

Dominant

Species?

=Total Cover

=Total Cover

=Total Cover

=Total Cover

/

=Total Cover

20% of total cover: 15.40

20% of total cover: 12.60

20% of total cover: 1.20

20% of total cover: 1.40

Indicator

Status

FACW

**FACU** 

FAC

FAC

**FAC** 

FAC

**FAC** 

OBL

OBL

OBL

FAC

FAC

FAC

FAC

**FACU** 

**FACU** 

FAC

**FACU** 

**FACW** 

Hydrophytic

Vegetation

Yes

Present?

FAC

**FACW** 

**FACW** 

**FACW** 

50% of tot	al cover: 12.50	20% of total cover:	5.00
Remarks: (If observed, list morpholo	gical adaptations	s below.)	

No

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Five Vegetation Strata:
7.				Tree – Woody plants, excluding woody vines,
8.				approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
10.				Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
11				than 3 in. (7.6 cm) DBH.
12.	7	=Total Cover		Shrub - Woody Plants, excluding woody vines,
50% of tot	al cover: 3.50 20%	6 of total cover:	1.40	approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum				<b>Herb</b> – All herbaceous (non-woody) plants, including
7.				herbaceous vines, regardless of size, <u>and</u> woody
8.				plants, except woody vines, less than approximately 3
9.				ft (1 m) in height.
10				Woody Vine – All woody vines, regardless of height.
11				
12				
	6	=Total Cover		
	al cover: 3.00 20%	% of total cover:	1.20	
Shrub Stratum 30 ft r				
	3		FACW	
8.		<del></del>		
9.				
10.		_		
11.				
12.	63	=Total Cover		
50% of tot		6 of total cover:	12.60	
Herb Stratum	207	o or total cover.		
	2		FAC	
13.				
14.				
15.				
16.				
17.				
18.				
19				
20				
21				
22	<del></del>			
	<u>77</u>	=Total Cover		
	al cover: 38.50 20%	% of total cover:	15.40	
Woody Vine Stratum				
6.	<del></del>			
7.		_		
8. 9.	<del></del>			
10.	<del></del>			
10.	25	=Total Cover		
50% of tot		6 of total cover:	5.00	
Remarks: (If observed, list morpholo		o or total covel.	<u> </u>	
Nemarks. (ii observed, list morpholo	gicai auaptations below.)			

Profile Desc	ription: (Describe t	o the de	pth needed to docu	ıment tl	ne indica	ator or c	onfirm th	e absence	of indicators.)	
Depth	Matrix		Redo	x Featur	es					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Te	exture	Remarks	
0 - 5	10YR 3/1	100					Sandy	Loam		
5 - 18	2.5Y 6/2	90	2.5Y 7/4	10	<u>C</u>	M	Sand			
18 - 24	2.5Y 7/6	65	2.5Y 7/1	35	D	М	Sand			
							-			
<sup>1</sup> Type: C=Co	ncentration, D=Depl	etion, RN	M=Reduced Matrix, N	/IS=Mas	ked San	d Grains.		<sup>2</sup> Location:	PL=Pore Lining, M=Matrix.	
Hydric Soil I	ndicators: (Applica	ble to al	I LRRs, unless othe	rwise n	oted.)			Indicators	for Problematic Hydric Soils <sup>3</sup> :	
Histosol (	(A1)		Thin Dark Su	urface (S	89) <b>(LRR</b>	S, T, U)		1 cm M	fluck (A9) (LRR O)	
Histic Ep	ipedon (A2)		Barrier Island	ds 1 cm	Muck (S	12)		2 cm M	fluck (A10) (LRR S)	
Black His	tic (A3)		(MLRA 15	3B, 153	D)			Coast I	Prairie Redox (A16)	
Hydroger	Sulfide (A4)		Loamy Muck	-		RR O)		(outs	side MLRA 150A)	
	Layers (A5)		Loamy Gleye	ed Matrix	x (F2)				ed Vertic (F18)	
_	Bodies (A6) (LRR P,		Depleted Ma	, ,					side MLRA 150A, 150B)	
	cky Mineral (A7) (LR								ont Floodplain Soils (F19) (LRR P, T)	
	esence (A8) (LRR U)	1	Depleted Da		, ,				alous Bright Floodplain Soils (F20)	
	ck (A9) <b>(LRR P, T)</b>	(4.44)	Redox Depre		(F8)			(MLRA 153B)		
-	Below Dark Surface	(A11)	Marl (F10) <b>(L</b>	-	4) (MI D	A 454\			arent Material (F21)	
	rk Surface (A12)	U DA 454	Depleted Oc			-	O D T)	Very Shallow Dark Surface (F22)  O, P, T) (outside MLRA 138, 152A in FL, 154)		
	airie Redox (A16) (M	ILKA 150			,	, .	O, P, 1)			
	osulfide (A18)		Umbric Surfa			-		Other (Explain in Remarks)		
	ucky Mineral (S1) <b>(L</b> eyed Matrix (S4)	KK U, S	Delta Ochric Reduced Ve				50B)	31		
Sandy Re			Piedmont Flo	,			•		tors of hydrophytic vegetation and	
	Matrix (S6)		Anomalous E				-			
	face (S7) <b>(LRR P, S</b> ,	т пл	(MLRA 14	-			20)			
	e Below Surface (S8)	-	Very Shallow					wetla	and hydrology must be present,	
(LRR S		,	(MLRA 13						ss disturbed or problematic.	
	ayer (if observed):									
Type: _	ches):						Hydri	c Soil Prese	ent? Yes ✔ No	
Remarks:							Hydri	C JOH I TES	ent: 165 · NO	
Hydric s	oil indicator S	35 ob	served.							



Photograph 25: View of scrub/shrub wetlands at Data Point 13.



Photograph 26: View of hydric soil profile at Data Point 13.

## WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Frankin - Kistler Tract City/County	y: Greensville County Sampling Date: 2025-04-29
Applicant/Owner: Otterdam Technology Group, LLC	State: Virginia Sampling Point: DP-14
Investigator(s): Nikolai Karlov, Jackson Livingstone, Jillian Burgan, Kyle Zinn, WSSI Section, Townsl	nip, Range:
Landform (hillside, terrace, etc.): Hillslope Local relief (conca	ve, convex, none): Linear Slope (%): 4
Subregion (LRR or MLRA): P 133A Lat: 36.80436028	Long: -77.5175106 Datum: NAD 83
Soil Map Unit Name: 40A - Woodington fine sandy loam, 0 to 2 per	9 77 10 17 0 10 0
· · · · · · · · · · · · · · · · · · ·	Yes No (If no, explain in Remarks.)
	<del></del>
<u> </u>	e "Normal Circumstances" present? Yes   No   No   No   No   No   No   No   N
Are Vegetation, Soil, or Hydrologynaturally problematic? (If SUMMARY OF FINDINGS – Attach site map showing sampling po	needed, explain any answers in Remarks.) int locations transects important features etc.
Hydrophytic Vegetation Present? Yes No Is the Sam	
Hydric Soil Present? Yes No within a W	etland? Yes No V
Wetland Hydrology Present? Yes No ✓	
Data point taken on upland hillslope with early to mid-	successional growth present following
previous tree clearing. This area slopes and drains do	wn into an adjacent low lying swamp
area. Conditions wetter than normal for this time of ye	ear.
-	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) — Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)  Marl Deposits (B15) (LRR U)	Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide Odor (C1)	Moss Trim Lines (B16)
Water Marks (B1) Oxidized Rhizospheres on Living Ro	
Sediment Deposits (B2)  — Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Drift Deposits (B3) Recent Iron Reduction in Tilled Soils	· /
Algal Mat or Crust (B4)  Thin Muck Surface (C7)	Geomorphic Position (D2)
Iron Deposits (B5) Other (Explain in Remarks)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)
Water-Stained Leaves (B9)	Sphagnum Moss (D8) (LRR T, U)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches):	
Saturation Present? Yes No V Depth (inches):	Wetland Hydrology Present? Yes No _✓
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspe	ections), if available:
Remarks:	
No water table or saturation observed within 24 inche	s from the ground surface.
	2 11 2111 1112 <b>9</b> 1 2 2111 21 2 2 1
	o mom the ground can acc
	onem the greatile call acco
	onem the great at an acc

50% of total cover: 21.00

50% of total cover: 22.00

50% of total cover: 11.00

50% of total cover: 41.00

50% of total cover: 6.00

Tree Stratum (Plot size: 30 ft r

Liriodendron tulipifera

2.

3.

4.

5. 6.

3.

4

5. 6.

2.

3.

4.

5.

6.

2.

3.

4.

5.

6.

7.

8. 9.

3.

4. 5. Liquidambar styraciflua

Sapling Stratum (Plot size: 30 ft r

Liquidambar styraciflua

Shrub Stratum (Plot size: 30 ft r

1. Ligustrum sinense

Liquidambar styraciflua

Vaccinium pallidum

Quercus michauxii

Herb Stratum (Plot size: 30 ft r

Rubus pensilvanicus

Vitis rotundifolia

Lonicera japonica

Danthonia spicata

Solidago altissima

Lonicera japonica

Smilax rotundifolia

Vitis rotundifolia

Typha latifolia

Dendrolycopodium obscurum

Polystichum acrostichoides

Woody Vine Stratum (Plot size: 30 ft r

Quercus phellos

Aralia spinosa

Quercus michauxii

Betula nigra

Pinus taeda

Ilex opaca
Acer rubrum

Betula nigra

Absolute

% Cover

25

10

5

2

42

20

<u>15</u> 5

2

2

44

5

5

5

3

2

2

22

25

15

15

10

5

5

5

2

82

5

5

2

12

Dominant

Species?

=Total Cover 20% of total cover: 8.40

=Total Cover

=Total Cover

=Total Cover

=Total Cover

20% of total cover: 2.40

20% of total cover: 16.40

20% of total cover: 4.40

20% of total cover: 8.80

Indicator

Status

**FACU** 

FACW

**FACW** 

FAC

FAC

FAC

FAC

FAC

FAC

FAC

**FACW** 

**FACW** 

FACU

FAC

**FAC** 

**FACU** 

**FACU** 

**FACU** 

OBL

**FACU** 

Hydrophytic

Yes

Vegetation

Present?

FAC

**FACW** 

**FAC** 

Sampling Point: DP-14	
Dominance Test worksheet:	
Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A	)
Total Number of Dominant Species Across All Strata: 11 (B	)
Percent of Dominant Species That Are OBL, FACW, or FAC: 72.72 (A	/B)
Prevalence Index worksheet:	
Total % Cover of: Multiply by:	
OBL species 2 x 1 = 2	
FACW species 13	
FAC species 102 x 3 = 306	
FACU species 75	
$\begin{array}{cccc} & & & & & & & \\ & & & & & \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & \\ & & \\ $	
01 L species	(D)
Column Totals. (71)	(B)
Prevalence Index = B/A = 3.30	
Hydrophytic Vegetation Indicators:	
1 - Rapid Test for Hydrophytic Vegetation	
✓ 2 - Dominance Test is >50%	
3 - Prevalence Index is ≤3.0 <sup>1</sup>	
Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
<sup>1</sup> Indicators of hydric soil and wetland hydrology mus present, unless disturbed or problematic.	st be
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.	<b>;</b>
Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.	
<b>Herb</b> – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, <u>and</u> woody plants, except woody vines, less than approximately ft (1 m) in height.	
Woody Vine – All woody vines, regardless of heigh	t.

Remarks:	(If observed, list morphological adaptations below.

No

Time	Tree Stratum		Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Five Vegetation Strata:
9.	7					
10.	0					
11						
Sapiling Stratum   Solve   S	11					
Saping Stratum   Sapi	12		12	Total Cover		
Merb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, including herbaceous vines, regardless of size, and woody plants, including herbaceous vines, regardless of size, and woody plants, including herbaceous vines, regardless of size, and woody plants, including herbaceous vines, regardless of height.    National Cover		50% of total cover: 21.0			8.40	
herbaceous vines, regardless of size, and woody   second vines, less than approximately 3 ft (1 m) in height.	Sapling Stratum		<del></del>			Herb – All herbaceous (non-woody) plants, including
	7					herbaceous vines, regardless of size, and woody
10						
11.						Woody Vine – All woody vines, regardless of height.
12.						
Shrub Stratum   30 ft r						
Shrub Stratum   30 ft r   7.						
7. 8. 9. 10. 11. 12.  22 = =Total Cover 50% of total cover: 11.00 20% of total cover: 4.40  Herb Stratum  12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22.  82 = =Total Cover 50% of total cover: 41.00 20% of total cover: 16.40  Woody Vine Stratum  6. 7. 8. 9. 10. 11. 12. 12. 13. 14. 15. 15. 16. 16. 17. 18. 19. 20. 21. 21. 22. 21. 22. 32. 33. 34. 34. 35. 36. 36. 36. 36. 37. 38. 39. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30	0		20%	of total cover:	8.80	
8. 9. 10. 11. 12.						
9.	0					
10. 11. 12. 22 = Total Cover 50% of total cover: 11.00 20% of total cover: 4.40  Herb Stratum 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22.  82 = Total Cover 50% of total cover: 41.00 20% of total cover: 16.40  Woody Vine Stratum 6. 7. 8. 9. 10.  12 = Total Cover 50% of total cover: 6.00 20% of total cover: 2.40	0					
11. 12.  22 =Total Cover 50% of total cover: 11.00 20% of total cover: 4.40  Herb Stratum  12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22.  82 =Total Cover 50% of total cover: 41.00 20% of total cover: 16.40  Woody Vine Stratum  6. 7. 8. 9. 10.  12 =Total Cover 50% of total cover: 6.00 20% of total cover: 2.40						
Solid Cover   11.00   20% of total cover   4.40	11					
Solid total cover   11.00   20% of total cover   4.40	12					
Herb Stratum   12.		50% of total agyor: 11 00			4 40	
12	Herb Stratum	30 % of total cover.	2078	or total cover.	4.40	
13. 14. 15. 16. 17. 18. 19. 20. 21. 22.  82 = Total Cover 50% of total cover: 41.00 20% of total cover: 16.40  Woody Vine Stratum 6. 7. 8. 9. 10.  12 = Total Cover 50% of total cover: 2.40	<u> </u>					
14. 15. 16. 17. 18. 19. 20. 21. 22.  82 =Total Cover 50% of total cover: 41.00 20% of total cover: 16.40  Woody Vine Stratum 6. 7. 8. 9. 10.  12 =Total Cover 50% of total cover: 2.40	13.					
16.						
17.	-					
18.	47					
19		_				
21	-	-				
22	20.					
82	21					
50% of total cover: 41.00 20% of total cover: 16.40  Woody Vine Stratum 6. 7. 8. 9. 10. 12 =Total Cover 50% of total cover: 6.00 20% of total cover: 2.40	22.		92	T-1-1 0		
Woody Vine Stratum         6.         7.         8.         9.         10.         12       =Total Cover         50% of total cover:       6.00       20% of total cover:       2.40		50% of total cover: <b>/11 0</b>			16 40	
6	Woody Vine Stratum	3070 of total cover. 41.0	<u>0</u> 2070	or total cover.	10.40	
7.	6.					
9						
10						
12 =Total Cover 50% of total cover: 6.00 20% of total cover: 2.40						
50% of total cover: 6.00 20% of total cover: 2.40	10.		12	=Total Cover		
—— l		50% of total cover: 6.00			2.40	
	Remarks: (If observed, I	ist morphological adaptation	ns below.)			

Profile Desc	ription: (Describe t	to the dept	h needed to docu	ıment t	he indica	ator or c	onfirm the absence of indic	cators.)		
Depth	Matrix		Redox	x Featur	es					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
0 - 2	10YR 3/2	100					Loam			
2 - 12	10YR 5/4	100					Sandy Loam			
12 - 14	2.5Y 5/4	100					Sandy Loam			
14 - 20	2.5Y 6/4	50					Sandy Loam			
14 - 20	2.5Y 5/3	50					Sandy Loam			
20 - 24	2.5Y 6/4	100					Sandy Clay Loam			
<sup>1</sup> Type: C=Co	ncentration, D=Depl	etion, RM=I	Reduced Matrix, N	/IS=Mas	ked San	d Grains.	<sup>2</sup> Location: PL=Por	e Lining, M=Matrix.		
Hydric Soil I	ndicators: (Applica	ble to all L	RRs, unless othe	rwise r	oted.)		Indicators for Pro	blematic Hydric Soils <sup>3</sup> :		
Histosol (	,		Thin Dark Su	ırface (S	59) <b>(LRR</b>	S, T, U)	1 cm Muck (A9	9) (LRR O)		
Histic Epi	ipedon (A2)		Barrier Island	ds 1 cm	Muck (S	12)	2 cm Muck (A1	(10) <b>(LRR S)</b>		
Black His	` '		(MLRA 15	3B, 153	D)		—— Coast Prairie F	Redox (A16)		
	n Sulfide (A4)		Loamy Muck	•	· , •	.RR O)	(outside ML	•		
	Layers (A5)		Loamy Gleye		` '		Reduced Verti	` ,		
	Bodies (A6) (LRR P,		Depleted Ma	` '			•	RA 150A, 150B)		
	cky Mineral (A7) (LR		Redox Dark		` '			dplain Soils (F19) (LRR P, T)		
	esence (A8) (LRR U)	)	Depleted Da		` '			ght Floodplain Soils (F20)		
	ck (A9) <b>(LRR P, T)</b>	(4.4.4)	Redox Depre		(F8)		(MLRA 153E			
•	Below Dark Surface	e (A11)	Marl (F10) <b>(L</b>	-	4) <b>(34)</b> D		Red Parent Ma			
	rk Surface (A12)	U DA 450A)	Depleted Oc			-	•	Dark Surface (F22)		
Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR 0					MLRA 138, 152A in FL, 154)					
	osulfide (A18)	DD 0 C)	Umbric Surfa	,			Other (Explain	in Remarks)		
-	ucky Mineral (S1) <b>(L</b>	KK (), (5)	Delta Ochric	. , .		•	<b>EOD</b> ) 31 11 4 41			
	leyed Matrix (S4)		Reduced Ve	•			,	ydrophytic vegetation and		
Sandy Re	Matrix (S6)		Anomalous E	•	,	, <b>.</b>	•			
• •	` ,	T 11\		•		`	20)			
	face (S7) <b>(LRR P, S</b> e Below Surface (S8	-	(MLRA 14 Very Shallow				wotland hyd	rology must be present		
Polyvalue	•	)	(MLRA 13		,	,	wetland hydrology must be present, unless disturbed or problematic.			
Restrictive L	ayer (if observed):									
Type:										
	ches):						Hydric Soil Present?	Yes No		
Remarks:										
Hydric s	oil indicators	not ob	served.							
_										



Photograph 27: View of uplands at Data Point 14.



Photograph 28: View of non-hydric soil profile at Data Point 14.

## WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Franklin - Kistler	Tract	City/County: Greens	ville County	Sampling Date: 2025-04-29			
Applicant/Owner: Otterdam Techno				Sampling Point: DP-15			
Investigator(s): Nikolai Karlov, Jackson Living		ction, Township, Range:					
Landform (hillside, terrace, etc.): Hillslop		relief (concave, convex,	none): None	Slope (%): 5			
Subregion (LRR or MLRA): P 133A							
	_		77.5171569				
Soil Map Unit Name: 10B3 - Craven cla				-			
Are climatic / hydrologic conditions on the site			No (If no, ex	xplain in Remarks.)			
Are Vegetation, Soil, or Hydro	logy significantly distur	rbed? Are "Normal C	Circumstances" present?	Yes V No			
Are Vegetation, Soil, or Hydro	logynaturally problema	atic? (If needed, ex	plain any answers in Rer	marks.)			
SUMMARY OF FINDINGS – Attach	site map showing san	mpling point locati	ons, transects, imp	portant features, etc.			
Hydrophytic Vegetation Present?	Yes V No	Is the Sampled Area					
Hydric Soil Present?	Yes No V	within a Wetland?	Yes	No 🗸			
Wetland Hydrology Present?	Yes No 🗸						
Remarks:							
Data point sampled in a fore	ested upland locate	ed along a nilisi	ope that drains	into an adjacent			
wetland. Conditions wetter	than normal for thi	is time of year.					
HYDROLOGY							
Wetland Hydrology Indicators:			Secondary Indicators (r	minimum of two required)			
Primary Indicators (minimum of one is requi	red; check all that apply)		Surface Soil Cracks				
Surface Water (A1)	Aquatic Fauna (B13)			d Concave Surface (B8)			
High Water Table (A2)	Marl Deposits (B15) (LR	RR U)	Drainage Patterns	(B10)			
Saturation (A3)	Hydrogen Sulfide Odor (	(C1)	Moss Trim Lines (B16)				
Water Marks (B1)	Oxidized Rhizospheres	on Living Roots (C3) Dry-Season Water Table (C2)					
Sediment Deposits (B2)	Presence of Reduced Iro	Iron (C4) Crayfish Burrows (C8)					
Drift Deposits (B3)	Recent Iron Reduction in	in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)					
Algal Mat or Crust (B4)	Thin Muck Surface (C7)	7) Geomorphic Position (D2)					
Iron Deposits (B5)	Other (Explain in Remar	Shallow Aquitard (D3)					
Inundation Visible on Aerial Imagery (B	7)		FAC-Neutral Test (	D5)			
Water-Stained Leaves (B9)			Sphagnum Moss ([	D8) <b>(LRR T, U)</b>			
Field Observations:							
Surface Water Present? Yes	No Depth (inches):						
Water Table Present? Yes	No Depth (inches):						
Saturation Present? Yes	No V Depth (inches):	Wetland	Hydrology Present?	Yes No V			
(includes capillary fringe)							
Describe Recorded Data (stream gauge, mo	onitoring well, aerial photos, pr	revious inspections), if a	vailable:				
Remarks:							
No water table or saturation	observed within 2	24 inches from	the ground surf	ace.			
			•				

Sampling Point:	DP-15	
orksheet:		
orksneet.		

Tree Stratum (Plot size: 30 ft r )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Pinus taeda	12	<u> </u>	FAC	
Liriodendron tulipifera	10		FACU	Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)
3. Acer rubrum	7		FAC	( ,
4. Carya tomentosa	6		170	Total Number of Dominant Species Across All Strata: 13 (B)
5. Liquidambar styraciflua	4		FAC	`` `
6. Quercus falcata	4		FACU	Percent of Dominant Species That Are OBL, FACW, or FAC: 53.84 (A/B)
0. Quereus falcata		=Total Cover	FACO	Prevalence Index worksheet:
50% of total cover: 27.5		of total cover:	11 00	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 30 ft r )	20%	oi total cover.	11.00	
		~	FACU	<u> </u>
1. Oxydendrum arboreum	4		FACU	FACW species $9$ $x = 18$ FAC species $102$ $x = 306$
2. Cornus florida	3			· — — — — — — — — — — — — — — — — — — —
3. <u>Ilex opaca</u>	3		FAC	FACU species 64 x 4 = 256
4. Liquidambar styraciflua	2		FAC	UPL species $3$ $x = 15$
5				Column Totals: 178 (A) 595 (B)
6				Prevalence Index = B/A = 3.34
		=Total Cover		Hydrophytic Vegetation Indicators:
50% of total cover: 6.00	0 20%	of total cover:	2.40	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30 ft r )				✓ 2 - Dominance Test is >50%
1. Ilex opaca	18	<b>✓</b>	FAC	3 - Prevalence Index is ≤3.0 <sup>1</sup>
2. Carpinus caroliniana	10	<b>✓</b>	FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Vaccinium formosum	4		FAC	
4. Cornus florida	3		FACU	
5				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be
6				present, unless disturbed or problematic.
	35	=Total Cover		Definitions of Five Vegetation Strata:
50% of total cover: 17.5	20%	of total cover:	7.00	Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 30 ft r )				approximately 20 ft (6 m) or more in height and 3 in.
1. Vitis rotundifolia	15	<b>✓</b>	FAC	(7.6 cm) or larger in diameter at breast height (DBH).
2. Lonicera japonica	12	<u> </u>	FACU	Sapling – Woody plants, excluding woody vines,
3. Mitchella repens	12	<u> </u>	FACU	approximately 20 ft (6 m) or more in height and less
4. Parthenocissus quinquefolia	5		FACU	than 3 in. (7.6 cm) DBH.
5. Toxicodendron radicans	5		FAC	Shrub - Woody Plants, excluding woody vines,
6. Carpinus caroliniana	4		FAC	approximately 3 to 20 ft (1 to 6 m) in height.
7. Polystichum acrostichoides	4		FACU	Horte All books account (non-use of a) planta including
8. Carya tomentosa	3			<b>Herb</b> – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
Piptochaetium avenaceum	3		UPL	plants, except woody vines, less than approximately 3
10. Smilax rotundifolia	3		FAC	ft (1 m) in height.
11. Chasmanthium latifolium	2		FAC	Woody Vine – All woody vines, regardless of height.
Oliasinantiium latifolium		=Total Cover		
50% of total cover: 37.0		of total cover:	14 80	
Woody Vine Stratum (Plot size: 30 ft r )	20%	oi total cover.	14.00	
	6	~	EAC	
1. Vitis rotundifolia	5		FAC	
2. Lonicera japonica	5		FACU	
3.				
4				
5				Hydrophytic
		=Total Cover	0.00	Vegetation
50% of total cover: 5.50	20%	of total cover:	2.20	Present? Yes No No
Remarks: (If observed, list morphological adaptation	ons below.)			

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Five Vegetation Strata:
7. Quercus michauxii	4	ohecies:	FACW	
8. Betula nigra	3		FACW	Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
9. Carpinus caroliniana	3		FAC	(7.6 cm) or larger in diameter at breast height (DBH).
10. Quercus nigra	2		FAC	Sonling Woody plants evaluding woody vines
			IAO	Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
11.				than 3 in. (7.6 cm) DBH.
12	55	=Total Cover		Shrub - Woody Plants, excluding woody vines,
50% of total cover: 27.		of total cover:	11.00	approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum				Howle All howle account (many used a) plants in all disp
7				<b>Herb</b> – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody
8.				plants, except woody vines, less than approximately 3
9.				ft (1 m) in height.
10.				Woody Vine – All woody vines, regardless of height.
11.				
12.				
	12	=Total Cover		
50% of total cover: 6.0		of total cover:	2.40	
Shrub Stratum 30 ft r				
7				
8.				
9.				
10.				
11.				
12.				
	35	=Total Cover		
50% of total cover: 17.5	50 20%	of total cover:	7.00	
Herb Stratum				
12. Microstegium vimineum	2		FAC	
13. Juniperus virginiana	1		FACU	
14. Quercus alba	1		FACU	
15. Quercus michauxii	1		FACW	
16. Quercus phellos	1		FACW	
17				
18				
19				
20				
21				
22.				
	74	=Total Cover		
50% of total cover: <u>37.</u>	00 20%	of total cover:	14.80	
Woody Vine Stratum				
6				
7				
8				
9				
9				
10.	11	=Total Cover		
	11	=Total Cover	2.20	
10.	11 0 20%		2.20	

	ription: (Describe t	to the dept				tor or c	onfirm th	e absence o	f indica	tors.)		
Depth	Matrix			K Featur		. 2	_					
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>		xture		Rem	arks	
0 - 3	2.5Y 4/3	100					Sandy	Loam				
3 - 20	2.5Y 5/3	100					Loamy	Sand				
20 - 24	2.5Y 6/4	100					Sand					
-												
<sup>1</sup> Type: C=Co	ncentration, D=Depl	etion, RM=	Reduced Matrix, N	1S=Mas	ked Sand	d Grains		<sup>2</sup> Location: P				
-	ndicators: (Applica	ble to all L			-			Indicators f		-	dric Soils	3:
Histosol (			Thin Dark Su					1 cm Mu	` '	•		
-	ipedon (A2)		Barrier Island		•	12)		2 cm Mu				
Black His			(MLRA 15		-			Coast P				
	Sulfide (A4)		Loamy Muck			RR O)		-		A 150A)		
	Layers (A5)		Loamy Gleye					Reduce				
_	Bodies (A6) (LRR P,	-	Depleted Ma					•		A 150A, 15	•	
	cky Mineral (A7) (LR		Redox Dark							plain Soils (		-
	esence (A8) (LRR U)	)	Depleted Da						-	ht Floodplai	n Solis (F.	20)
	ck (A9) (LRR P, T)	. (	Redox Depre		(ГО)		(MLRA 153B) ——Red Parent Material (F21)					
-	Below Dark Surface rk Surface (A12)	(A11)	Marl (F10) <b>(L</b> Depleted Oc	-	1) /MI D /	\ 151\	— Red Parent Material (F21)  — Very Shallow Dark Surface (F22)					
	airie Redox (A16) ( <b>M</b>	II RA 150A'				-						
	osulfide (A18)	ILIX IOOA,	Umbric Surfa		,		O, . , .,	-		n Remarks)	1027 111 1	L, 104)
	ucky Mineral (S1) <b>(L</b>	RR O. S)	Delta Ochric	•					хрічіт ії	ritomantoj		
-	eyed Matrix (S4)	0, 0,	Reduced Ve			•	50B)	<sup>3</sup> Indicate	ors of hy	drophytic ve	enetation :	and
Sandy Re			Piedmont Flo	,			•		713 OI 11y	aropriyilo v	goldlion	ario
-	Matrix (S6)		Anomalous E				-					
	face (S7) <b>(LRR P, S</b>	, T, U)	(MLRA 14	•	•	•	,					
Polyvalue	e Below Surface (S8	)	Very Shallow	Dark S	Surface (F	22)		wetla	nd hydro	ology must b	e present	,
(LRR S	S, T, U)		(MLRA 13	8, 152A	in FL, 1	54)		unles	s disturb	ed or probl	ematic.	
Restrictive L	ayer (if observed):											
Type:												
Depth (in	ches):						Hydrid	c Soil Presei	nt?	Yes	No	<u>~</u>
Remarks:							•					
Hydric s	oil indicators	not ob	served.									



Photograph 29: View of non-hydric soil profile at Data Point 15.

## WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Frankin - Kistler Tract	City/County: Greensville County Sampling Date: 2025-04-29
Applicant/Owner: Otterdam Technology Group, LLC	State: Virginia Sampling Point: DP-16
Investigator(s): Nikolai Karlov, Jackson Livingstone, Jillian Burgan, Kyle Zinn, WSSI S	Section, Township, Range:
	ral relief (concave, convex, none): Concave Slope (%): 3
Subregion (LRR or MLRA): P 133A Lat: 36.803391	
Soil Map Unit Name: 40A - Woodington fine sandy loam,	
Are climatic / hydrologic conditions on the site typical for this time of year	r? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly dis	sturbed? Are "Normal Circumstances" present? Yes 🔽 No
Are Vegetation, Soil, or Hydrology naturally proble	ematic? (If needed, explain any answers in Remarks.)
	ampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ✔ No	Is the Sampled Area
Hydric Soil Present? Yes V No	within a Wetland? Yes V No
Wetland Hydrology Present? Yes ✓ No	
Remarks:	p system. Conditions wetter than normal for this
	p system. Conditions wetter than normal for this
time of year.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)  Marl Deposits (B15) (	
Saturation (A3)  Hydrogen Sulfide Odd	
	es on Living Roots (C3)  Dry-Season Water Table (C2)
Sediment Deposits (B2)  Presence of Reduced	
✓ Drift Deposits (B3) Recent Iron Reduction	
Algal Mat or Crust (B4)  Thin Muck Surface (C	
Iron Deposits (B5) Other (Explain in Rem	——————————————————————————————————————
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)
Water-Stained Leaves (B9)	Sphagnum Moss (D8) (LRR T, U)
Field Observations:	<u> </u>
Surface Water Present? Yes ✔ No Depth (inche	vs): 0
Water Table Present? Yes ✓ No Depth (inche	
Saturation Present? Yes No Depth (inche	· <del></del>
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos,	, previous inspections), if available:
Remarks:	
Relians.	
Wetland hydrology indicators observed.	
, , ,	

Tree Stratum (Plot size: 30 ft r	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. Betula nigra	20	<u> </u>	FACW		
Quercus michauxii	20		FACW	Number of Dominant Species That Are OBL, FACW, or FAC: 6 (	(A)
3. Ilex opaca	10		FAC		Λ)
4. Pinus taeda	5		FAC	Total Number of Dominant Species Across All Strata: 6 (	(B)
5. Quercus rubra	5				Б)
<u> </u>	2		FACU	Percent of Dominant Species That Are OBL FACW, or FAC: 100.00	(A /D)
6. Acer rubrum		T-1-1 0	FAC	(	A/B)
500% of total account 21.0	62	=Total Cover	12.40	Prevalence Index worksheet:	
50% of total cover: 31.0	20%	of total cover:	12.40	Total % Cover of: Multiply by:	_
Sapling Stratum (Plot size: 30 ft r )		. 4	E40	OBL species $\frac{7}{7}$ $x = \frac{7}{111}$	_
Carpinus caroliniana	5		FAC	FACW species <u>57</u> x 2 = <u>114</u>	_
2. <u>Ilex opaca</u>	5		FAC	FAC species 47 x 3 = 141	_
3. Ulmus americana	2		FAC	FACU species <u>15</u> x 4 = <u>60</u>	_
4				UPL species 0 x 5 = 0	_
5				Column Totals: 126 (A) 322	_(B)
6				Prevalence Index = B/A = 2.55	_
	12	=Total Cover		Hydrophytic Vegetation Indicators:	
50% of total cover: 6.00	20%	of total cover:	2.40	1 - Rapid Test for Hydrophytic Vegetation	
Shrub Stratum (Plot size: 30 ft r )				✓ 2 - Dominance Test is >50%	
1. Ilex opaca	2		FAC	3 - Prevalence Index is ≤3.0 <sup>1</sup>	
2.				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	)
3.					,
4.					
<u>i</u>	-				
5.				¹Indicators of hydric soil and wetland hydrology mu	ust be
6	2			present, unless disturbed or problematic.	
100		=Total Cover	0.40	Definitions of Five Vegetation Strata:	
50% of total cover: 1.00	20%	of total cover:	0.40	Tree – Woody plants, excluding woody vines,	
Herb Stratum (Plot size: 30 ft r )				approximately 20 ft (6 m) or more in height and 3 i	
1. Arundinaria tecta	15		FACW	(7.6 cm) or larger in diameter at breast height (DB	11).
2. Athyrium asplenioides	10		FAC	Sapling – Woody plants, excluding woody vines,	
3. Woodwardia areolata	7		OBL	approximately 20 ft (6 m) or more in height and les	38
4. Lonicera japonica	5		FACU	than 3 in. (7.6 cm) DBH.	
5. Mitchella repens	5		FACU	Shrub - Woody Plants, excluding woody vines,	
6. Arisaema triphyllum	2		FACW	approximately 3 to 20 ft (1 to 6 m) in height.	
7. Ulmus americana	2		FAC	Herb – All herbaceous (non-woody) plants, includi	ina
8. Vaccinium formosum	2		FAC	herbaceous vines, regardless of size, and woody	ng
0				plants, except woody vines, less than approximate	ely 3
40				ft (1 m) in height.	
11.				Woody Vine – All woody vines, regardless of heig	ıht.
	48	=Total Cover		, , , ,	
50% of total cover: 24.0		of total cover:	9.60		
	20%	or total cover:	3.00		
Woody Vine Stratum (Plot size: 30 ft r )	•				
Smilax rotundifolia	2		FAC		
2					
3.					
4					
5				Hydrophytic	
	2	=Total Cover		Vegetation	
50% of total cover: 1.00	20%	of total cover:	0.40	Present? Yes V No No	
Remarks: (If observed, list morphological adaptatio	ns below.)			<del></del>	

Troe Ctrotum		Absolute	Dominant	Indicator	Definitions of Five Vegetation Strate.
Tree Stratum		% Cover	Species?	Status	Definitions of Five Vegetation Strata:
0					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,
11.					approximately 20 ft (6 m) or more in height and less
12.					than 3 in. (7.6 cm) DBH.
		62	=Total Cover		Shrub - Woody Plants, excluding woody vines,
	50% of total cover: <b>31.0</b>	0 20%	of total cover:	12.40	approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum					Herb – All herbaceous (non-woody) plants, including
7					herbaceous vines, regardless of size, <u>and</u> woody
•					plants, except woody vines, less than approximately 3
					ft (1 m) in height.
					Woody Vine – All woody vines, regardless of height.
12					
			=Total Cover		
	50% of total cover: <b>6.00</b>	20%	of total cover:	2.40	
Shrub Stratum	30 ft r				
7					
8					
9.					
10					
12					
	4.00		=Total Cover	0.40	
	50% of total cover: 1.00	20%	of total cover:	0.40	
Herb Stratum					
13.					
15					
16					
17.					
19 20.			-		
21 22.					
		48	=Total Cover		
	50% of total cover: 24.0		of total cover:	9.60	
Woody Vine Stratum	24.0	2070	or total cover.		
7.					
Ω					
9.					
10.					
		2	=Total Cover		
	50% of total cover: 1.00		of total cover:	0.40	
Remarks: (If observed 1	ist morphological adaptation				L

Profile Desci	ription: (Describe t	o the de	pth needed to doci	ument tl	ne indica	ator or c	onfirm the absence	of indicators.)	
Depth	Matrix		-	x Featur				·	
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0 - 2	10YR 3/2	100					Silt Loam		
2 - 10	2.5Y 4/1	98	10YR 6/6	2	С	М	Sandy Clay Loam		
10 - 16	2.5Y 6/1	95	7.5YR 6/6	5	С	М	Sandy Clay Loam		
16 - 24	2.5Y 6/1	80	7.5YR 6/6	20	С		Sandy Clay		
-									
_									
¹Type: C=Co	ncentration, D=Depl	etion, RN		—— //S=Mas	ked San	d Grains	Location:	PL=Pore Lining, M=Matrix.	
Hydric Soil I	ndicators: (Applica	ble to al	I LRRs, unless other	erwise n	oted.)			for Problematic Hydric Soils <sup>3</sup> :	
Histosol (	(A1)		Thin Dark Su	urface (S	9) <b>(LRR</b>	S, T, U)	1 cm N	luck (A9) <b>(LRR O)</b>	
Histic Epi	pedon (A2)		Barrier Islan	ds 1 cm	Muck (S	12)	2 cm N	luck (A10) <b>(LRR S)</b>	
Black His			(MLRA 15	3B, 153	D)		Coast I	Prairie Redox (A16)	
Hydroger	Sulfide (A4)		Loamy Muck	y Miner	al (F1) <b>(L</b>	.RR O)	(outs	ide MLRA 150A)	
	Layers (A5)		Loamy Gley	ed Matri	x (F2)	•	Reduce	ed Vertic (F18)	
	Bodies (A6) (LRR P,	T. U)	✓ Depleted Ma		` '			ide MLRA 150A, 150B)	
	cky Mineral (A7) <b>(LR</b>			, ,			•	ont Floodplain Soils (F19) <b>(LRR P, T)</b>	
	esence (A8) <b>(LRR U)</b>		Depleted Da		` '			lous Bright Floodplain Soils (F20)	
	ck (A9) (LRR P, T)		Redox Depre		, ,			A 153B)	
		(//11)			(10)				
-	Below Dark Surface	: (A11)	Marl (F10) <b>(I</b>	-	4) /MI D	. 454\		arent Material (F21)	
	rk Surface (A12)	U DA 454	Depleted Oc			-	•	hallow Dark Surface (F22)	
	airie Redox (A16) (M	LRA 150						outside MLRA 138, 152A in FL, 154)	
	osulfide (A18)		Umbric Surfa	,			Other (	Explain in Remarks)	
-	ucky Mineral (S1) <b>(L</b> l	RR O, S)		. , .		•			
	eyed Matrix (S4)		Reduced Ve	•			,	tors of hydrophytic vegetation and	
Sandy Re	edox (S5)		Piedmont Flo	oodplain	Soils (F	19) <b>(MLF</b>	RA 149A)		
Stripped	Matrix (S6)		Anomalous I	Bright Fl	oodplain	Soils (F	20)		
Dark Surf	face (S7) <b>(LRR P, S</b> ,	T, U)	(MLRA 14	9A, 153	C, 153D	)			
	e Below Surface (S8)	)	Very Shallov	v Dark S	urface (F	<sup>-</sup> 22)	wetla	and hydrology must be present,	
(LRR S	S, T, U)		(MLRA 13	8, 152A	in FL, 1	54)	unless disturbed or problematic.		
	ayer (if observed):								
Type: _									
	ches):						Hydric Soil Prese	ent? Yes V No No	
Remarks:									
Hydric se	oil indicator F	=3 ob:	served.						
,									



Photograph 30: View of forested wetlands at Data Point 16.



Photograph 31: View of hydric soil profile at Data Point 16.

## WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Frankin - Kistler Ti	ract City	y/County: <b>Greensville County</b>	Sampling Date: 2025-04-30
Applicant/Owner: Otterdam Techno			ginia Sampling Point: DP-17
Investigator(s): Nikolai Karlov, Jackson Livingstone, J	Jillian Burgan, Kyle Zinn, WSSI Section	, Township, Range:	
Landform (hillside, terrace, etc.): Draw	Local relie	of (concave, convex, none): Concav	e Slope (%): 2
Subregion (LRR or MLRA): P 133A	Lat: 36.80207586	Long: -77.52641238	Datum: NAD 83
Soil Map Unit Name: 40A - Woodingto			sification: None
Are climatic / hydrologic conditions on the site	typical for this time of year?	Yes No (If	no, explain in Remarks.)
Are Vegetation, Soil, or Hydrold	ogy significantly disturbed	? Are "Normal Circumstances" pre	esent? Yes 🗸 No
Are Vegetation, Soil, or Hydrold	ogynaturally problematic?	(If needed, explain any answers	in Remarks.)
SUMMARY OF FINDINGS – Attach	site map showing sampl	ing point locations, transects	s, important features, etc.
Hydrophytic Vegetation Present?	Yes No Ist	the Sampled Area	
, , , ,	<del></del>	thin a Wetland?	✓ No
l '	Yes No		<del></del>
Remarks: Data point taken in a broad, o	nently sloped draw a	above culvert and larger	swamp system
Portions of draw show piling			
	•		•
isolated areas show leaf stai	ning. Conditions we	tter than normal for this	time of year.
HYDROLOGY			
		O	A construction of
Wetland Hydrology Indicators:			ators (minimum of two required)
Primary Indicators (minimum of one is require		Surface Soil	
Surface Water (A1)	Aquatic Fauna (B13)		getated Concave Surface (B8)
High Water Table (A2)	Marl Deposits (B15) (LRR U	· —	
Saturation (A3)	Hydrogen Sulfide Odor (C1)		
Water Marks (B1)	Oxidized Rhizospheres on L		Water Table (C2)
Sediment Deposits (B2)	Presence of Reduced Iron (0		
Drift Deposits (B3)	Recent Iron Reduction in Till		isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Thin Muck Surface (C7)		Position (D2)
Iron Deposits (B5)	Other (Explain in Remarks)	Shallow Aqu	• •
Inundation Visible on Aerial Imagery (B7)		FAC-Neutral	` '
✓ Water-Stained Leaves (B9)		Sphagnum N	Moss (D8) <b>(LRR T, U)</b>
Field Observations:	4 - 4 ( )		
	No Depth (inches):	<u> </u>	
_ <del></del>	No Depth (inches): 12	<u> </u>	
l ——	No Depth (inches): 6	Wetland Hydrology Prese	nt? Yes No No
(includes capillary fringe)			
Describe Recorded Data (stream gauge, mor	nitoring well, aerial photos, previo	ous inspections), if available:	
Remarks:			
NAV-Alexa de la contra dispetar			
Wetland hydrology indicators	s observea.		

**VEGETATION (Five Strata)** – Use scientific names of plants.

Tre	e Stratum (Plot size: 30 ft r )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1.	Pinus taeda	60	<u> </u>	FAC	
2.	Quercus michauxii	5		FACW	Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)
3.	Ulmus americana	5		FAC	(1)
3. 4.	llex opaca	2		FAC	Total Number of Dominant Species Across All Strata: 6 (B)
т. 5.	пех ораса			FAC	( ,
5. 6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)
0.		72 =	Total Cover		Prevalence Index worksheet:
	50% of total cover: 36.0		of total cover:	14 40	Total % Cover of: Multiply by:
Sor		20%	oi total cover.	14.40	OBL species 0
	oling Stratum (Plot size: 30 ft r )	_	<b>/</b>	FAC	FACW species 9 x 2 = 18
	Acer rubrum	5		FAC	
2.	Liquidambar styraciflua	3			FAC species 101 x 3 = 303
3.	llex opaca	2		FAC	FACU species $\frac{4}{0}$ $x = \frac{16}{0}$
4.	Quercus alba	2		FACU	UPL species $0$ $x = 0$
5.					Column Totals: <u>114</u> (A) <u>337</u> (B)
6.					Prevalence Index = B/A = 2.95
			Total Cover		Hydrophytic Vegetation Indicators:
	50% of total cover: 6.00	20%	of total cover:	2.40	1 - Rapid Test for Hydrophytic Vegetation
Shr	ub Stratum (Plot size: 30 ft r )				✓ 2 - Dominance Test is >50%
1.					3 - Prevalence Index is ≤3.0 <sup>1</sup>
2.					Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.					
4.					
5.					<sup>1</sup> Indicators of hydric soil and wetland hydrology must be
_					
6.					present, unless disturbed or problematic.
ь.			Total Cover		Definitions of Five Vegetation Strata:
б.	50% of total cover:	$\overline{}$	Total Cover		
	50% of total cover:	$\overline{}$			Definitions of Five Vegetation Strata:  Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
		$\overline{}$		FAC	Definitions of Five Vegetation Strata:  Tree – Woody plants, excluding woody vines,
<u>Her</u>	b Stratum (Plot size: 30 ft r )	20%	of total cover:		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).
<u>Her</u> 1.	b Stratum (Plot size: 30 ft r ) Vitis rotundifolia	7 5	of total cover:	FAC	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
<u>Her</u> 1. 2.	b Stratum (Plot size: 30 ft r ) Vitis rotundifolia Liquidambar styraciflua	7 5 2	of total cover:	FAC FAC	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,
<u>Her</u> 1. 2. 3. 4.	b Stratum (Plot size: 30 ft r ) Vitis rotundifolia Liquidambar styraciflua Campsis radicans Dichanthelium clandestinum	7 5 2 2	of total cover:	FAC FAC FAC	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.
Her 1. 2. 3. 4. 5.	Vitis rotundifolia Liquidambar styraciflua Campsis radicans Dichanthelium clandestinum Dioscorea villosa	7 5 2 2 2	of total cover:	FAC FAC FACW FACW	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
Her 1. 2. 3. 4. 5.	b Stratum (Plot size: 30 ft r ) Vitis rotundifolia Liquidambar styraciflua Campsis radicans Dichanthelium clandestinum	7 5 2 2	of total cover:	FAC FAC FAC	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.
Her 1. 2. 3. 4. 5. 6.	Vitis rotundifolia Liquidambar styraciflua Campsis radicans Dichanthelium clandestinum Dioscorea villosa	7 5 2 2 2	of total cover:	FAC FAC FACW FACW	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
Her 1. 2. 3. 4. 5. 6. 7.	b Stratum (Plot size: 30 ft r ) Vitis rotundifolia Liquidambar styraciflua Campsis radicans Dichanthelium clandestinum Dioscorea villosa Parthenocissus quinquefolia	7 5 2 2 2	of total cover:	FAC FAC FACW FACW	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
Her 1. 2. 3. 4. 5. 6. 7. 8. 9.	Vitis rotundifolia Liquidambar styraciflua Campsis radicans Dichanthelium clandestinum Dioscorea villosa	7 5 2 2 2	of total cover:	FAC FAC FACW FACW	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
Her 1. 2. 3. 4. 5. 6. 7. 8. 9.	b Stratum (Plot size: 30 ft r ) Vitis rotundifolia Liquidambar styraciflua Campsis radicans Dichanthelium clandestinum Dioscorea villosa Parthenocissus quinquefolia	7 5 2 2 2	of total cover:	FAC FAC FACW FACW	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.
Her 1. 2. 3. 4. 5. 6. 7. 8. 9.	b Stratum (Plot size: 30 ft r ) Vitis rotundifolia Liquidambar styraciflua Campsis radicans Dichanthelium clandestinum Dioscorea villosa Parthenocissus quinquefolia	7 5 2 2 2 2 2	of total cover:	FAC FAC FACW FACW	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
Her 1. 2. 3. 4. 5. 6. 7. 8. 9.	Vitis rotundifolia Liquidambar styraciflua Campsis radicans Dichanthelium clandestinum Dioscorea villosa Parthenocissus quinquefolia	20%  7 5 2 2 2 2 2 2 2 2 2 2	of total cover:	FAC FAC FACW FACW FACU	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.
Her 1. 2. 3. 4. 5. 6. 7. 8. 9. 10.	b Stratum (Plot size: 30 ft r ) Vitis rotundifolia Liquidambar styraciflua Campsis radicans Dichanthelium clandestinum Dioscorea villosa Parthenocissus quinquefolia	20%  7 5 2 2 2 2 2 2 2 2 2 2	of total cover:	FAC FAC FACW FACW FACU	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.
Her 1. 2. 3. 4. 5. 6. 7. 8. 9. 10.	b Stratum (Plot size: 30 ft r ) Vitis rotundifolia Liquidambar styraciflua Campsis radicans Dichanthelium clandestinum Dioscorea villosa Parthenocissus quinquefolia  50% of total cover: 10.00 ody Vine Stratum (Plot size: 30 ft r )	20%  7 5 2 2 2 2 2 2 2 0 20%	of total cover:	FAC FAC FACW FACW FACU  4.00	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.
Her 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11.	b Stratum (Plot size: 30 ft r ) Vitis rotundifolia Liquidambar styraciflua Campsis radicans Dichanthelium clandestinum Dioscorea villosa Parthenocissus quinquefolia	20%  7 5 2 2 2 2 2 2 2 2 2 2	of total cover:	FAC FAC FACW FACW FACU	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.
Her 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11.	b Stratum (Plot size: 30 ft r ) Vitis rotundifolia Liquidambar styraciflua Campsis radicans Dichanthelium clandestinum Dioscorea villosa Parthenocissus quinquefolia  50% of total cover: 10.00 ody Vine Stratum (Plot size: 30 ft r )	20%  7 5 2 2 2 2 2 2 2 0 20%	of total cover:	FAC FAC FACW FACW FACU  4.00	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.
Her 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. Wo 1. 2. 3.	b Stratum (Plot size: 30 ft r ) Vitis rotundifolia Liquidambar styraciflua Campsis radicans Dichanthelium clandestinum Dioscorea villosa Parthenocissus quinquefolia  50% of total cover: 10.00 ody Vine Stratum (Plot size: 30 ft r )	20%  7 5 2 2 2 2 2 2 2 0 20%	of total cover:	FAC FAC FACW FACW FACU  4.00	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.
Her 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11.	b Stratum (Plot size: 30 ft r ) Vitis rotundifolia Liquidambar styraciflua Campsis radicans Dichanthelium clandestinum Dioscorea villosa Parthenocissus quinquefolia  50% of total cover: 10.00 ody Vine Stratum (Plot size: 30 ft r )	20%  7 5 2 2 2 2 2 2 2 0 20%	of total cover:	FAC FAC FACW FACW FACU  4.00	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.
Her 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. Wo 1. 2. 3.	b Stratum (Plot size: 30 ft r ) Vitis rotundifolia Liquidambar styraciflua Campsis radicans Dichanthelium clandestinum Dioscorea villosa Parthenocissus quinquefolia  50% of total cover: 10.00 ody Vine Stratum (Plot size: 30 ft r )	20%  7 5 2 2 2 2 2 2 0 20%  10	Total Cover:	FAC FAC FACW FACW FACU  4.00	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.
Her 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. Wo 1. 2. 3. 4.	b Stratum (Plot size: 30 ft r ) Vitis rotundifolia Liquidambar styraciflua Campsis radicans Dichanthelium clandestinum Dioscorea villosa Parthenocissus quinquefolia  50% of total cover: 10.00 ody Vine Stratum (Plot size: 30 ft r ) Smilax rotundifolia	20%  7 5 2 2 2 2 2 2 2 10 10 10	Total Cover:	FAC FAC FACW FACW FACU  4.00	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.
Her 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. Wo 1. 2. 3. 4.	b Stratum (Plot size: 30 ft r ) Vitis rotundifolia Liquidambar styraciflua Campsis radicans Dichanthelium clandestinum Dioscorea villosa Parthenocissus quinquefolia  50% of total cover: 10.00 ody Vine Stratum (Plot size: 30 ft r )	20%  7 5 2 2 2 2 2 2 2 10 10 10	Total Cover:	FAC FAC FACW FACW FACU  4.00	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.

Sampling Point: \_DP-17

Tree Chrestown		Absolute	Dominant	Indicator	Definitions of Five Venetation Streets
Tree Stratum		% Cover	Species?	Status	Definitions of Five Vegetation Strata:
0					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,
11.					approximately 20 ft (6 m) or more in height and less
12.					than 3 in. (7.6 cm) DBH.
· - · -		72 :	=Total Cover		Shrub - Woody Plants, excluding woody vines,
	50% of total cover: 36.0		of total cover:	14.40	approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum					Herb – All herbaceous (non-woody) plants, including
7.					herbaceous vines, regardless of size, <u>and</u> woody
^					plants, except woody vines, less than approximately 3
_					ft (1 m) in height.
	_				Woody Vine – All woody vines, regardless of height.
12					
			=Total Cover		
	50% of total cover: <b>6.00</b>	20%	of total cover:	2.40	
Shrub Stratum	30 ft r				
7					
8					
9					
12					
	500/ // /		=Total Cover		
Llank Otrastava	50% of total cover:	20%	of total cover:		
Herb Stratum					
14					
15.					
16.					
17.					
19.					
20					
21.	_				
22.					
	_	20	=Total Cover		
	50% of total cover: 10.0	0 20%	of total cover:	4.00	
Woody Vine Stratum					
6.					
7					
8.					
9.					
10					
	_		=Total Cover		
	50% of total cover: <u>5.00</u>		of total cover:	2.00	
Remarks: (If observed, li	ist morphological adaptatior	ns below.)			

Profile Desc	ription: (Describe t	o the de	pth needed to docu	ıment tl	ne indic	ator or c	onfirm the a	bsence of	indicators.)
Depth	Matrix		Redox	x Featur					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Textur	re	Remarks
0 - 4	2.5Y 4/3	100					Loam		
4 - 12	2.5Y 5/2	98	10YR 4/6	2	С	М	Sandy Lo	am	
12 - 24	2.5Y 6/1	65	10YR 6/8	35	С	М	Sandy Clay	Loam	
						-			
<sup>1</sup> Type: C=Co	ncentration, D=Depl	etion, RN	M=Reduced Matrix, M	/IS=Mas	ked San	d Grains	. <sup>2</sup> Lo	cation: PL	_=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Applica	ble to al	I LRRs, unless othe	rwise n	oted.)		Ind	licators fo	r Problematic Hydric Soils <sup>3</sup> :
Histosol (	(A1)		Thin Dark Su	urface (S	89) <b>(LRR</b>	S, T, U)		_1 cm Muc	ck (A9) <b>(LRR O)</b>
Histic Ep	ipedon (A2)		Barrier Island	ds 1 cm	Muck (S	12)		_2 cm Muc	ck (A10) <b>(LRR S)</b>
Black His	tic (A3)		(MLRA 15	3B, 153	D)			Coast Pra	airie Redox (A16)
Hydroger	Sulfide (A4)		Loamy Muck	-		RR O)		(outsid	le MLRA 150A)
	Layers (A5)		Loamy Gleye	ed Matrix	x (F2)			_	Vertic (F18)
_	Bodies (A6) (LRR P,	-	✓ Depleted Ma	, ,					le MLRA 150A, 150B)
	cky Mineral (A7) (LR								t Floodplain Soils (F19) (LRR P, T)
	esence (A8) (LRR U)		Depleted Da		, ,				us Bright Floodplain Soils (F20)
	ck (A9) <b>(LRR P, T)</b>	(4.44)	Redox Depre		(F8)			(MLRA	
-	Below Dark Surface	(A11)	Marl (F10) <b>(L</b>	-	4) (841 B	. 454\			ent Material (F21)
	rk Surface (A12)	U DA 454	Depleted Oc			-		-	llow Dark Surface (F22)
	airie Redox (A16) (M	ILKA 150			•	, ,	O, P, 1)	•	tside MLRA 138, 152A in FL, 154)
	osulfide (A18)		Umbric Surfa			-		_Other (Ex	xplain in Remarks)
-	ucky Mineral (S1) <b>(L</b> eyed Matrix (S4)	KK U, 3	Delta Ochric  Reduced Ver	. , .		•	50B)	3Indiantor	ro of hydrophytic vegetation and
Sandy Re			Piedmont Flo	,			•	indicator	s of hydrophytic vegetation and
-	Matrix (S6)		Anomalous E				-		
	face (S7) <b>(LRR P, S</b> ,	T. U)	(MLRA 14	-			20)		
	e Below Surface (S8)		Very Shallow	•	•	•		wetland	d hydrology must be present,
(LRR S	, ,	,	(MLRA 13						disturbed or problematic.
Restrictive L	ayer (if observed):								
Type:								"	
	ches):						Hydric Sc	oil Present	t? Yes <u> </u>
Remarks:									
Hydric s	oil indicator F	=3 ob	served.						



Photograph 32: View of forested wetlands at Data Point 17.



Photograph 33: View of hydric soil profile at Data Point 17.

## WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Frankin - Kistler Tract City/County: Greensville County Sampling Date: 2025-04-30						
Applicant/Owner: Otterdam Technology Group, LLC  State: Virginia Sampling Point: DP-18						
Investigator(s): Nikolai Karlov, Jackson Livingstone, Jillian Burgan, Kyle Zinn, WSSI Section, Township, Range:						
Landform (hillside, terrace, etc.): Drainageway Local relief (concave, convex, none): Concave Slope (%): 3						
Subregion (LRR or MLRA): P 133A Lat: 36.80174513 Long: -77.52562209 Datum: NAD 83						
Soil Map Unit Name: 40A - Woodington fine sandy loam, 0 to 2 percent slopes NWI classification: None						
Are climatic / hydrologic conditions on the site typical for this time of year?  Yes  No  (If no, explain in Remarks.)						
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No						
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)						
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.						
Hydrophytic Vegetation Present? Yes No Is the Sampled Area						
Hydric Soil Present?  Yes  No  within a Wetland?  Yes  No						
Wetland Hydrology Present?  Yes No   V						
Remarks: Data point taken in a narrow drainageway. No hydric soils or evidence of saturation, some						
drifted pine needles and leaves observed which are evident of periodic fast moving water						
through this area which drains out onto the adjacent road. Conditions wetter than normal for						
·						
this time of year.						
HYDROLOGY						
Wetland Hydrology Indicators:  Secondary Indicators (minimum of two required)						
Primary Indicators (minimum of one is required; check all that apply)  Surface Soil Cracks (B6)						
Surface Water (A1) Aquatic Fauna (B13) Sparsely Vegetated Concave Surface (B8)  Med Brancie (R45) (LBB L1)						
High Water Table (A2)  Marl Deposits (B15) (LRR U)  Drainage Patterns (B10)  Mary Table (A2)  Mary Deposits (B15) (LRR U)  Mary Table (A2)						
Saturation (A3)  Hydrogen Sulfide Odor (C1)  Moss Trim Lines (B16)						
Water Marks (B1)  Oxidized Rhizospheres on Living Roots (C3)  Dry-Season Water Table (C2)  Oxidized Rhizospheres on Living Roots (C3)  Oxidized Rhizospheres on Living Roots (C3)  Oxidized Rhizospheres on Living Roots (C3)						
Sediment Deposits (B2)  Presence of Reduced Iron (C4)  Crayfish Burrows (C8)  Presence of Reduced Iron (C4)  Crayfish Burrows (C8)						
Drift Deposits (B3)  Recent Iron Reduction in Tilled Soils (C6)  Saturation Visible on Aerial Imagery (C9)  Thir Much Surface (C7)						
Algal Mat or Crust (B4)  Thin Muck Surface (C7)  Geomorphic Position (D2)						
Challess Applied (DO)						
Iron Deposits (B5)Other (Explain in Remarks)Shallow Aquitard (D3)						
Inundation Visible on Aerial Imagery (B7)  FAC-Neutral Test (D5)						
Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  FAC-Neutral Test (D5)  Sphagnum Moss (D8) (LRR T, U)						
Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  Field Observations:  FAC-Neutral Test (D5)  Sphagnum Moss (D8) (LRR T, U)						
Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)  FAC-Neutral Test (D5) Sphagnum Moss (D8) (LRR T, U)  Field Observations: Surface Water Present? Yes No Depth (inches):						
Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)  FAC-Neutral Test (D5) Sphagnum Moss (D8) (LRR T, U)  Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes Depth (inches):						
Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)  FAC-Neutral Test (D5) Sphagnum Moss (D8) (LRR T, U)  Field Observations:  Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches):  Saturation Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No V						
Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  FAC-Neutral Test (D5) Sphagnum Moss (D8) (LRR T, U)  Field Observations:  Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches):  (includes capillary fringe)  Wetland Hydrology Present? Yes No V  Wetland Hydrology Present? Yes No V  Wetland Hydrology Present? Yes No V						
Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)  FAC-Neutral Test (D5) Sphagnum Moss (D8) (LRR T, U)  Field Observations:  Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches):  Saturation Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No V						
Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  FAC-Neutral Test (D5) Sphagnum Moss (D8) (LRR T, U)  Field Observations:  Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches):  (includes capillary fringe)  Wetland Hydrology Present? Yes No V  Wetland Hydrology Present? Yes No V  Wetland Hydrology Present? Yes No V						
Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  FAC-Neutral Test (D5) Sphagnum Moss (D8) (LRR T, U)  Field Observations:  Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches):  (includes capillary fringe)  Wetland Hydrology Present? Yes No V  Wetland Hydrology Present? Yes No V  Wetland Hydrology Present? Yes No V						
Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  FAC-Neutral Test (D5) Sphagnum Moss (D8) (LRR T, U)  Field Observations:  Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No V  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:						
Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)  FAC-Neutral Test (D5) Sphagnum Moss (D8) (LRR T, U)  Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:						
Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  FAC-Neutral Test (D5) Sphagnum Moss (D8) (LRR T, U)  Field Observations:  Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No V  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:						
Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  FAC-Neutral Test (D5) Sphagnum Moss (D8) (LRR T, U)  Field Observations:  Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No V  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:						
Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  FAC-Neutral Test (D5) Sphagnum Moss (D8) (LRR T, U)  Field Observations:  Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No V  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:						
Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  FAC-Neutral Test (D5) Sphagnum Moss (D8) (LRR T, U)  Field Observations:  Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No V  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:						
Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  FAC-Neutral Test (D5) Sphagnum Moss (D8) (LRR T, U)  Field Observations:  Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No V  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:						
Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  FAC-Neutral Test (D5) Sphagnum Moss (D8) (LRR T, U)  Field Observations:  Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches):  Wetland Hydrology Present? Yes No V  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks:						

**VEGETATION (Five Strata)** – Use scientific names of plants.

/EGETATION (Five Strata) - Use scient	ific names	of plants.		Sampling Point: DP-18
Tree Stratum (Plot size: 30 ft r )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
Liriodendron tulipifera	15		FACU	Number of Dominant Species
2. Acer rubrum	12	·	FAC	That Are OBL, FACW, or FAC: 5 (A)
3. Pinus taeda	7		FAC	Total Number of Dominant
4. Ilex opaca	3		FAC	Species Across All Strata: 7 (B)
5. Quercus alba	3		FACU	
6. Quercus falcata	2		FACU	Percent of Dominant Species That Are OBL, FACW, or FAC: 71.42 (A/B)
o		=Total Cover	17100	Prevalence Index worksheet:
50% of total cover: 21		of total cover:	8.4	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 30 ft r )		or total cover.	<del></del>	OBL species 0 $x = 0$
	10	<b>~</b>	FAC	
1. Carpinus caroliniana	12		FAC	· — — —
2. Liquidambar styraciflua	4			FAC species 85 x 3 = 255
3. Acer rubrum	2		FAC	FACU species 42 x 4 = 168
4. Ilex opaca	2		FAC	UPL species $0   x 5 = 0$
5				Column Totals: 129 (A) 427 (B)
6				Prevalence Index = B/A = 3.31
	20	=Total Cover		Hydrophytic Vegetation Indicators:
50% of total cover: 10	20%	of total cover:	4	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30 ft r )	<u></u>			✓ 2 - Dominance Test is >50%
1. Ilex opaca	5	<b>✓</b>	FAC	3 - Prevalence Index is ≤3.0 <sup>1</sup>
2.				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.				
4.				
5.				1
6.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
0.	5	=Total Cover		
50% of total access 2.5			1	Definitions of Five Vegetation Strata:
50% of total cover: 2.5	20%	of total cover:	<del></del>	Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 30 ft r				approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
1. Vitis rotundifolia	30		FAC	(* 10 din) di langor in alameter at prodot noight (#211).
2. Polystichum acrostichoides	15		FACU	Sapling – Woody plants, excluding woody vines,
3. Chasmanthium latifolium	5		FAC	approximately 20 ft (6 m) or more in height and less
4. Lonicera japonica	4		FACU	than 3 in. (7.6 cm) DBH.
5. Microstegium vimineum	3		FAC	Shrub - Woody Plants, excluding woody vines,
6. Symphoricarpos orbiculatus	3		FACU	approximately 3 to 20 ft (1 to 6 m) in height.
7. Carex flaccosperma	2		FACW	Herb – All herbaceous (non-woody) plants, including
8.				herbaceous vines, regardless of size, <u>and</u> woody
9.				plants, except woody vines, less than approximately 3
10				ft (1 m) in height.
11.				<b>Woody Vine</b> – All woody vines, regardless of height.
··· <u> </u>	62	=Total Cover		
50% of total cover: 31		of total cover:	12 4	
	20%	or total cover.	12.7	
Woody Vine Stratum (Plot size: 30 ft r )				
1				
2				
3				
4.				
5				Hydrophytic
		=Total Cover		Vegetation
50% of total cover:	20%	of total cover:		Present? Yes _ No
Remarks: (If observed, list morphological adaptation	ons below.)			<del></del>

Tree Stratum		Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Five Vegetation Strata:
7.					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,
4.4					approximately 20 ft (6 m) or more in height and less
					than 3 in. (7.6 cm) DBH.
			=Total Cover		Shrub - Woody Plants, excluding woody vines,
	50% of total cover: 21	20%	of total cover:	8.4	approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum					Herb – All herbaceous (non-woody) plants, including
7					herbaceous vines, regardless of size, and woody
8					plants, except woody vines, less than approximately 3 ft (1 m) in height.
					Woody Vine – All woody vines, regardless of height.
					<b>woody vine</b> – All woody vines, regardless of neight.
12		20	Total Cover		
	50% of total cover: 10		=Total Cover of total cover:	1	
Shrub Stratum	30 ft r		oi total cover.	<del>-</del>	
·					
12.					
		5	=Total Cover		
	50% of total cover: 2.5	20%	of total cover:	1	
Herb Stratum					
12.					
13					
14					
15					
16					
17.					
18.					
19.					
20.					
21 22.					
22.		62	=Total Cover		
	50% of total cover: 31		of total cover:	12.4	
Woody Vine Stratum	0070 01 total 00V01. <u>01</u>		or total cover.		
6.					
7.					
8.					
9.	_				
10.					
			=Total Cover		
	50% of total cover:	20%	of total cover:		
Remarks: (If observed, li	ist morphological adaptation	ns below.)			•

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	Matrix		Redo	x Featur	es					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
0 - 2	10YR 4/3	100					Silt Loam			
2 - 14	10YR 5/3	95					Silt Loam			
2 - 14	10YR 4/3	5					Silt Loam			
14 - 24	2.5Y 5/3	90	10YR 5/6	10	С	М	Sandy Clay Loam			
-										
¹Type: C=Co	ncentration, D=Depl	etion, RN	M=Reduced Matrix, I	MS=Mas	ked San	d Grains	. <sup>2</sup> Location: PL=P	Pore Lining, M=Matrix.		
	ndicators: (Applical							roblematic Hydric Soils <sup>3</sup> :		
Histosol (			Thin Dark S		-	S, T, U)	1 cm Muck (	(A9) <b>(LRR O)</b>		
Histic Ep	ipedon (A2)		Barrier Islan	ds 1 cm	Muck (S	12)	2 cm Muck (	(A10) (LRR S)		
Black His			(MLRA 15				Coast Prairie			
Hydroger	n Sulfide (A4)		Loamy Muck	ky Miner	al (F1) <b>(L</b>	RR O)	(outside N	MLRA 150A)		
Stratified	Layers (A5)		Loamy Gley	ed Matri	x (F2)		Reduced Ve	ertic (F18)		
	Bodies (A6) (LRR P,	T, U)	Depleted Ma				(outside N	MLRA 150A, 150B)		
_	cky Mineral (A7) (LR	-	J) Redox Dark	Surface	(F6)		· · · · · · · · · · · · · · · · · · ·	oodplain Soils (F19) (LRR P, T)		
Muck Pre	esence (A8) (LRR U)		Depleted Da				Anomalous I	Bright Floodplain Soils (F20)		
1 cm Mud	ck (A9) (LRR P, T)		Redox Depr	essions	(F8)		(MLRA 15	(MLRA 153B)		
Depleted	Below Dark Surface	(A11)	Marl (F10) (I	LRR U)						
Thick Da	rk Surface (A12)		Depleted Oc	hric (F1	1) <b>(MLR</b>	A 151)	Very Shallow Dark Surface (F22)			
Coast Pra	airie Redox (A16) ( <b>M</b>	LRA 150	DA) Iron-Mangar	nese Ma	sses (F1	2) <b>(LRR</b>	O, P, T) (outside	0, P, T) (outside MLRA 138, 152A in FL, 154)		
Iron Monosulfide (A18) Umbric Surface (F13) (LRR P, T, U) Other (Explain in Remarks)								ain in Remarks)		
Sandy M	ucky Mineral (S1) <b>(L</b> l	RR O, S	Delta Ochric	(F17) <b>(I</b>	MLRA 15	i1)	<del></del>			
Sandy G	leyed Matrix (S4)		Reduced Ve	rtic (F18	) (MLRA	150A, 1	50B) <sup>3</sup> Indicators o	of hydrophytic vegetation and		
Sandy Re	edox (S5)		Piedmont Fl	oodplain	Soils (F	19) <b>(MLF</b>	RA 149A)			
Stripped	Matrix (S6)		Anomalous	Bright Fl	oodplain	Soils (F	20)			
Dark Sur	face (S7) <b>(LRR P, S,</b>	T, U)	(MLRA 14	I9A, 153	C, 153D)	)				
	e Below Surface (S8)	)	Very Shallov	v Dark S	Surface (F	-22)	wetland h	ydrology must be present,		
(LRR S			(MLRA 13	88, 152A	in FL, 1	54)	unless dis	sturbed or problematic.		
Restrictive L Type:	ayer (if observed):									
Depth (in	ches):						Hydric Soil Present?	Yes No ✔		
Remarks:							,			
Hydric s	oil indicators	not c	bserved.							



Photograph 34: View of uplands at Data Point 18.



Photograph 35: View of non-hydric soil profile at Data Point 18.

## WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Frankin - Kistler Ti	ract City/County:	:Greensville County Sampling Date: 2025-05-01				
Applicant/Owner: Otterdam Techno	J	State: Virginia Sampling Point: DP-19				
Investigator(s): Nikolai Karlov, Jackson Livingstone,	- · · · · · · · · · · · · · · · · · · ·					
Landform (hillside, terrace, etc.): Floodpla		ve, convex, none): Linear Slope (%): 2				
Subregion (LRR or MLRA): P 133A		Long: -77.52080592 Datum: NAD 83				
		ent slopes NWI classification: None				
Are climatic / hydrologic conditions on the site	typical for this time of year?	res No resplain in Remarks.)				
Are Vegetation, Soil, or Hydrold	ogysignificantly disturbed? Are	e "Normal Circumstances" present? Yes 🗸 No				
Are Vegetation, Soil, or Hydrold		needed, explain any answers in Remarks.)				
<u> </u>		nt locations, transects, important features, etc.				
Hydrophytic Vegetation Present?	Yes No Is the Samp	aled Area				
, , , ,	Yes No within a We					
,	Yes No					
Remarks:	lanad flaadalain adiacent	to otroom Conditions watter than				
,	ореа поочрыт айјасетт і	to stream. Conditions wetter than				
normal for this time of year.						
		J				
HYDROLOGY						
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one is require	ed; check all that apply)	Surface Soil Cracks (B6)				
Surface Water (A1)	Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2)	Marl Deposits (B15) (LRR U)					
Saturation (A3)	Hydrogen Sulfide Odor (C1)					
Water Marks (B1)	Oxidized Rhizospheres on Living Roo					
Sediment Deposits (B2)	Presence of Reduced Iron (C4)					
✓ Drift Deposits (B3)	Recent Iron Reduction in Tilled Soils (					
Algal Mat or Crust (B4)	Thin Muck Surface (C7)					
Iron Deposits (B5)	Other (Explain in Remarks)	<u>—</u>				
Inundation Visible on Aerial Imagery (B7)	<del></del>	FAC-Neutral Test (D5)				
Water-Stained Leaves (B9)		Sphagnum Moss (D8) (LRR T, U)				
Field Observations:	Г					
	No Depth (inches):					
<del></del>	No Depth (inches): 16					
Saturation Present? Yes	No Depth (inches): 4	Wetland Hydrology Present? Yes ✓ No				
(includes capillary fringe)						
Describe Recorded Data (stream gauge, mor	nitoring well. aerial photos, previous inspe	ections). if available:				
	, , , , , , , , , , , , , , , , , , ,	0.0010), 2.22.5.				
B control						
Remarks:						
Wetland hydrology indicator	observed.					
	00001704.					

Absolute

Dominant Indicator

Tree	Stratum (Plot size: 30 ft r )	% Cover	Species?	Status	Dominance Test worksheet:
1.	Pinus taeda	15	<b>v</b>	FAC	Number of Dominant Species
2.	Platanus occidentalis	15	<b>v</b>	FACW	That Are OBL, FACW, or FAC: 9 (A)
3.	llex opaca	8		FAC	Total Number of Dominant
4.	Liriodendron tulipifera	8		FACU	Species Across All Strata: 12 (B)
5.	Acer rubrum	5		FAC	Percent of Dominant Species
6.	Ulmus americana	3		FAC	That Are OBL, FACW, or FAC: 75.00 (A/B)
		56	=Total Cover		Prevalence Index worksheet:
	50% of total cover: 28.0	0 20%	of total cover:	11.20	Total % Cover of: Multiply by:
Sap	ling Stratum (Plot size: 30 ft r )				OBL species 5 $x 1 = 5$
1.	Acer rubrum	5	<b>✓</b>	FAC	FACW species 39 x 2 = 78
2.	Liquidambar styraciflua	3	<b>✓</b>	FAC	FAC species 94 x 3 = 282
	Quercus falcata	3	~	FACU	FACU species 40 x 4 = 160
4.	Liriodendron tulipifera	2		FACU	UPL species 0 x 5 = 0
5.	·				Column Totals: 178 (A) 525 (B)
6.					Prevalence Index = B/A = 2.94
		13	=Total Cover		Hydrophytic Vegetation Indicators:
	50% of total cover: 6.50		of total cover:	2.60	1 - Rapid Test for Hydrophytic Vegetation
Shri	ub Stratum (Plot size: 30 ft r )				✓ 2 - Dominance Test is >50%
1.	llex opaca	5	V	FAC	✓ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
2.	Ligustrum japonicum	3		FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.	Lindera benzoin	2		FACW	
4.	Liriodendron tulipifera	2		FACU	
5.	<u> </u>			.,,,,,,	The Reserve of Books and Secretary the state of Books and Books an
6.					<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
٥.		12	=Total Cover		Definitions of Five Vegetation Strata:
	50% of total cover: 6.00		of total cover:	2.40	Tree – Woody plants, excluding woody vines,
Herl	<u>b Stratum</u> (Plot size: 30 ft r				approximately 20 ft (6 m) or more in height and 3 in.
1.	Athyrium asplenioides	20	<b>✓</b>	FAC	(7.6 cm) or larger in diameter at breast height (DBH).
2.	Campsis radicans	15		FAC	Sapling – Woody plants, excluding woody vines,
3.	Lonicera japonica	15		FACU	approximately 20 ft (6 m) or more in height and less
4.	Arundinaria tecta	12		FACW	than 3 in. (7.6 cm) DBH.
5.	Onoclea sensibilis	5		FACW	Shrub - Woody Plants, excluding woody vines,
6.	Parthenocissus quinquefolia	5		FACU	approximately 3 to 20 ft (1 to 6 m) in height.
7.	Poa sylvestris	5		FACW	
8.	Woodwardia areolata	5		OBL	<b>Herb</b> – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, <u>and</u> woody
9.	Vitis rotundifolia	3		FAC	plants, except woody vines, less than approximately 3
	Aralia spinosa	2		FAC	ft (1 m) in height.
	Alalia Spiliusa			FACU	Woody Vine – All woody vines, regardless of height.
	-	2			
	Polystichum acrostichoides	2	Total Cayor	FACU	All woody vines, regardless of height.
	Polystichum acrostichoides	89	=Total Cover		All woody viries, regardless of height.
	Polystichum acrostichoides  50% of total cover: 44.5	89	=Total Cover of total cover:		All woody viries, regardless of height.
Woo	Polystichum acrostichoides  50% of total cover: 44.5  ody Vine Stratum (Plot size: 30 ft r )	89 0 20%	of total cover:	17.80	All woody virtes, regardless of height.
<u>Woo</u>	Polystichum acrostichoides  50% of total cover: 44.5  ody Vine Stratum (Plot size: 30 ft r )  Smilax rotundifolia	89 : 0 20%	of total cover:	17.80 FAC	All woody virtes, regardless of height.
<u>Woo</u> 1. 2.	Polystichum acrostichoides  50% of total cover: 44.5  ody Vine Stratum (Plot size: 30 ft r )	89 0 20%	of total cover:	17.80	All woody virtes, regardless of height.
Woo 1. 2. 3.	Polystichum acrostichoides  50% of total cover: 44.5  ody Vine Stratum (Plot size: 30 ft r )  Smilax rotundifolia	89 : 0 20%	of total cover:	17.80 FAC	All woody vines, regardless of height.
Wood 1. 2. 3. 4.	Polystichum acrostichoides  50% of total cover: 44.5  ody Vine Stratum (Plot size: 30 ft r )  Smilax rotundifolia	89 : 0 20%	of total cover:	17.80 FAC	All woody virtes, regardless of height.
Woo 1. 2. 3.	Polystichum acrostichoides  50% of total cover: 44.5  ody Vine Stratum (Plot size: 30 ft r )  Smilax rotundifolia	89 20% 5 3	of total cover:	17.80 FAC	Hydrophytic
Wood 1. 2. 3. 4.	Polystichum acrostichoides  50% of total cover: 44.5  ody Vine Stratum (Plot size: 30 ft r )  Smilax rotundifolia  Lonicera japonica	89 20% 5 3	of total cover:	17.80  FAC FACU	Hydrophytic Vegetation
Woo 1. 2. 3. 4. 5.	Polystichum acrostichoides  50% of total cover: 44.5  ody Vine Stratum (Plot size: 30 ft r )  Smilax rotundifolia	89 20% 5 3 8 20%	of total cover:	17.80  FAC FACU	Hydrophytic

## **VEGETATION Continued (Five Strata)** – Use scientific names of plants.

Tree Stratum		Abso % Co		Status	Definitions of Five Vegetation Strata:
7. Aralia spinosa		2	<u> </u>	FAC	Tree – Woody plants, excluding woody vines,
8					approximately 20 ft (6 m) or more in height and 3 in.
0					(7.6 cm) or larger in diameter at breast height (DBH).
10					Sapling – Woody plants, excluding woody vines,
4.4					approximately 20 ft (6 m) or more in height and less
12.					than 3 in. (7.6 cm) DBH.
		56	=Total Cover		Shrub - Woody Plants, excluding woody vines,
	50% of total cover:	28.00	20% of total cover	: 11.20	approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum					Herb – All herbaceous (non-woody) plants, including
7.					herbaceous vines, regardless of size, and woody
0					plants, except woody vines, less than approximately 3
9.					ft (1 m) in height.
4.0					Woody Vine – All woody vines, regardless of height.
11					
12					
		13	=Total Cover		
	50% of total cover:	6.50	20% of total cover	2.60	
Shrub Stratum	30 ft r				
7.					
8.					
9					
12					
		12	=Total Cover	0.40	
	50% of total cover:	6.00	20% of total cover	2.40	
Herb Stratum					
12.					
13.					
15					
15 16.					
17.					
18.					
19.					
20.					
21.					
22.					
		89	=Total Cover		
	50% of total cover:	44.50	20% of total cover	17.80	
Woody Vine Stratum					
6.					
7.					
8.					
9.					
10.					
		8	=Total Cover		
	50% of total cover:	4.00	20% of total cover	1.60	
Remarks: (If observed, I	ist morphological ada	ptations belov	w.)		•

Sampling Point: DP-19

Profile Desc	ription: (Describe t	o the de	pth needed to doc	ument t	he indica	tor or c	onfirm the absence of	indicators.)		
Depth	Matrix		-	x Featur				·		
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
0 - 4	10YR 3/2	100					Silt Loam			
4 - 10	2.5Y 5/2	90	10YR 4/6	10	С	М	Sandy Loam			
10 - 24	10YR 6/2	60	10YR 4/6	10	С	М	Sandy Clay			
10 - 24	7.5YR 5/1	30					Sandy Clay			
-										
-										
-										
¹Type: C=Co	ncentration, D=Depl	etion, RN	M=Reduced Matrix, N	лS=Mas	ked San	d Grains	<sup>2</sup> Location: PL	=Pore Lining, M=Matrix.		
Hydric Soil I	ndicators: (Applica	ble to all	I LRRs, unless othe	erwise n	oted.)		Indicators fo	r Problematic Hydric Soils <sup>3</sup> :		
Histosol (	(A1)		Thin Dark S	urface (S	89) <b>(LRR</b>	S, T, U)	1 cm Mud	ck (A9) (LRR O)		
Histic Epi	ipedon (A2)		Barrier Islan	ds 1 cm	Muck (S	12)	2 cm Muc	ck (A10) <b>(LRR S)</b>		
Black His	stic (A3)		(MLRA 15	3B, 153	(D)		Coast Pra	airie Redox (A16)		
Hydroger	Sulfide (A4)		Loamy Muck	y Miner	al (F1) <b>(L</b>	RR O)	(outsid	e MLRA 150A)		
	Layers (A5)		Loamy Gley	ed Matri	x (F2)	,	Reduced	Vertic (F18)		
	Bodies (A6) (LRR P,	T. U)	✓ Depleted Ma		` '			e MLRA 150A, 150B)		
	cky Mineral (A7) (LR			, ,			•	t Floodplain Soils (F19) (LRR P, T)		
	esence (A8) <b>(LRR U)</b>		Depleted Da		` '			us Bright Floodplain Soils (F20)		
	, , , ,	'			` '			• • • • • • • • • • • • • • • • • • • •		
	ck (A9) (LRR P, T)	(044)	Redox Depre		(ГО)		(MLRA			
	Below Dark Surface	e (A11)	Marl (F10) (I	-	4) <b>(14)</b> D			ent Material (F21)		
	rk Surface (A12)		Depleted Oc			-	•	llow Dark Surface (F22)		
	airie Redox (A16) (M	ILRA 150								
	osulfide (A18)		Umbric Surfa	ace (F13	3) <b>(LRR F</b>	P, T, U)	Other (Explain in Remarks)			
-	ucky Mineral (S1) <b>(L</b>	RR O, S)				•				
Sandy GI	eyed Matrix (S4)		Reduced Ve	rtic (F18	B) (MLRA	150A, 1	50B) <sup>3</sup> Indicator	s of hydrophytic vegetation and		
Sandy Re	edox (S5)		Piedmont Flo	oodplain	Soils (F	19) <b>(MLF</b>	RA 149A)			
Stripped	Matrix (S6)		Anomalous I	Bright Fl	oodplain	Soils (F	20)			
Dark Sur	face (S7) (LRR P, S,	, T, U)	(MLRA 14	9A, 153	C, 153D)	)				
Polyvalue	e Below Surface (S8)	)	Very Shallov	v Dark S	Surface (F	22)	wetland hydrology must be present,			
(LRR S	S, T, U)		(MLRA 13	8, 152A	in FL, 1	154) unless disturbed or problematic.				
	ayer (if observed):									
Type:								,		
Depth (in	ches):						Hydric Soil Present	t? Yes V No No		
Remarks:										
Hydric s	oil indicator F	=3 obs	served.							
,		0.0.0								



Photograph 36: View of forested wetlands at Data Point 19.



Photograph 37: View of hydric soil profile at Data Point 19.

## WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Frankin - Kistler Tract City/County: Greensville County Sampling Date: 2025-05-01
Applicant/Owner: Otterdam Technology Group, LLC State: Virginia Sampling Point: DP-20
nvestigator(s): Nikolai Karlov, Jackson Livingstone, Jillian Burgan, Kyle Zinn, WSSI Section, Township, Range:
andform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Linear Slope (%): 2
Subregion (LRR or MLRA): P 133A Lat: 36.80113046 Long: -77.51865087 Datum: NAD 83
Soil Map Unit Name: 40A - Woodington fine sandy loam, 0 to 2 percent slopes NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year?  Yes  No  (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes V No
Are Vegetation, Soil, or Hydrology significantly disturbed? Are Normal Circumstances present? Tes No
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present?  Yes No Is the Sampled Area
Hydric Soil Present?  Yes No within a Wetland?  Yes No W
Wetland Hydrology Present? Yes No No
Remarks: Data point taken on a gently sloped floodplain adjacent to stream, no soil saturation above
12". Conditions wetter than normal for this time of year.
HYDROLOGY
Wetland Hydrology Indicators:  Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)  Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B13) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)  Marl Deposits (B15) (LRR U)  Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide Odor (C1) Moss Trim Lines (B16)
Water Marks (B1) Oxidized Rhizospheres on Living Roots (C3) Dry-Season Water Table (C2)
Sediment Deposits (B2) Presence of Reduced Iron (C4) Crayfish Burrows (C8)
Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)  Thin Muck Surface (C7)  Geomorphic Position (D2)
Iron Deposits (B5) Other (Explain in Remarks) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) FAC-Neutral Test (D5)
Water-Stained Leaves (B9) Sphagnum Moss (D8) (LRR T, U)
Field Observations:
Surface Water Present? Yes No Depth (inches):
Water Table Present? Yes No Depth (inches):
Saturation Present? Yes No _v Depth (inches): Wetland Hydrology Present? Yes No _v
(includes capillary fringe)
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Remarks:
No water table or saturation observed within 24 inches from the ground surface.

<b>/EGETATION (Five Strata)</b> – Use scient	ific names	of plants.		Sampling Point: DP-20
Tree Stratum (Plot size: 30 ft r )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Liriodendron tulipifera	20	~	FACU	Number of Dominant Species
2. Acer rubrum	5		FAC	That Are OBL, FACW, or FAC: 5 (A)
3. Carpinus caroliniana	5		FAC	Total Number of Dominant
4. Ulmus americana	5		FAC	Species Across All Strata: 8 (B)
5. Liquidambar styraciflua	3		FAC	
6			TAC	Percent of Dominant Species That Are OBL, FACW, or FAC: 62.50 (A/B)
	38	=Total Cover		Prevalence Index worksheet:
50% of total cover: 19	20%	of total cover:	7.6	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 30 ft r )				OBL species 0 x 1 = 0
Carpinus caroliniana	5	~	FAC	FACW species $2   x 2 = 4$
2. Ulmus americana	5	<u> </u>	FAC	FAC species 58 x 3 = 174
3. Ilex opaca	2		FAC	FACU species 63 x 4 = 252
4. Quercus falcata	2		FACU	UPL species $0$ $x = 0$
5.	<u> </u>			Column Totals: 123 (A) 430 (B)
6.				Prevalence Index = $B/A = 3.49$
o	14	T-1-1 0		
7		=Total Cover	2.0	Hydrophytic Vegetation Indicators:
50% of total cover: 7	20%	of total cover:	2.8	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30 ft r )				<u>✓</u> 2 - Dominance Test is >50%
1. Ilex opaca	3		FAC	3 - Prevalence Index is ≤3.0 <sup>1</sup>
2. Viburnum nudum	2		FACW	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3				
4.				
5.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be
6.				present, unless disturbed or problematic.
·	5	=Total Cover		Definitions of Five Vegetation Strata:
50% of total cover: 2.5		of total cover:	1	
	20%	or total cover.	<del></del>	Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
Herb Stratum (Plot size: 30 ft r				(7.6 cm) or larger in diameter at breast height (DBH).
1. Lonicera japonica	<u>15</u>		FACU	(1.10 cm) or larger in alameter at prodet neight (2211).
2. Polystichum acrostichoides	15		FACU	Sapling – Woody plants, excluding woody vines,
3. Poa annua	8		FACU	approximately 20 ft (6 m) or more in height and less
4. Athyrium asplenioides	5		FAC	than 3 in. (7.6 cm) DBH.
5. Viola sororia	5		FAC	Shrub - Woody Plants, excluding woody vines,
6. Sanicula canadensis	3		FACU	approximately 3 to 20 ft (1 to 6 m) in height.
7.				Herb – All herbaceous (non-woody) plants, including
8.				herbaceous vines, regardless of size, <u>and</u> woody
0				plants, except woody vines, less than approximately 3
10				ft (1 m) in height.
				Woody Vine – All woody vines, regardless of height.
11				Troody Tille 7 ill Woody Villes, regardless of Height.
0-		=Total Cover	40.0	
50% of total cover: 25.5	20%	of total cover:	10.2	
Woody Vine Stratum (Plot size: 30 ft r )				
Toxicodendron radicans	15		FAC	
2.				
3.				
4.				
5.				
·	15	-Total Cavar		Hydrophytic
500/ //·· 7 5		=Total Cover	3	Vegetation No. No.
50% of total cover: 7.5	20%	of total cover:	<u> </u>	Present? Yes No No
Remarks: (If observed, list morphological adaptation	_	or total cover:	<u> </u>	Present? Yes No

Tree Stratum		Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Five Vegetation Strata:
7.		70 00101	<u> </u>		Tree – Woody plants, excluding woody vines,
8.					approximately 20 ft (6 m) or more in height and 3 in.
0					(7.6 cm) or larger in diameter at breast height (DBH).
					Sapling – Woody plants, excluding woody vines,
11.					approximately 20 ft (6 m) or more in height and less
					than 3 in. (7.6 cm) DBH.
-		38	=Total Cover		Shrub - Woody Plants, excluding woody vines,
	50% of total cover: 19	20%	of total cover:	7.6	approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum					Herb – All herbaceous (non-woody) plants, including
7.					herbaceous vines, regardless of size, <u>and</u> woody
					plants, except woody vines, less than approximately 3
_					ft (1 m) in height.
					Woody Vine – All woody vines, regardless of height.
40					
		14	=Total Cover		
	50% of total cover: 7	20%	of total cover:	2.8	
Shrub Stratum	30 ft r				
7.					
0					
			•		
4.4					
	_	5	=Total Cover		
	50% of total cover: 2.5	20%	of total cover:	1	
Herb Stratum					
12					
13.					
14.					
15					
16.					
17					
18					
19					
20					
21					
22					
		51	=Total Cover		
	50% of total cover: <b>25.5</b>	20%	of total cover:	10.2	
Woody Vine Stratum					
6.					
7.					
8.					
9.					
10.					
		15	=Total Cover		
	50% of total cover: 7.5	20%	of total cover:	3	
Remarks: (If observed, li	ist morphological adaptation	ns below.)			

	ription: (Describe t	o the de	-			ator or c	onfirm the a	bsence of i	ndicators.)			
Depth	Matrix			x Featur		1 - 2	T t		D			
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Textu	re	Rem	arks		
0 - 2	10YR 3/2	100					Loam					
2 - 12	10YR 3/3	100					Sandy Lo	oam				
12 - 16	2.5Y 5/4	100					Loamy Sa	and				
16 - 24	2.5Y 5/4	95	7.5YR 4/4	5	С	М	Loamy Sa	and				
-												
_												
<sup>1</sup> Type: C=Co	ncentration, D=Depl	etion. RM	=Reduced Matrix. N	—— ∕IS=Mas	ked Sand	d Grains		ocation: PL=	Pore Lining, M=I	Matrix.		
	ndicators: (Applica								Problematic Hy			
Histosol (			Thin Dark S		-	S, T, U)			(A9) <b>(LRR O)</b>			
Histic Epi	pedon (A2)		Barrier Islan	ds 1 cm	Muck (S	12)		_2 cm Muck	(A10) (LRR S)			
Black His	tic (A3)		(MLRA 15	3B, 153	D)			_Coast Prai	rie Redox (A16)			
Hydroger	Sulfide (A4)		Loamy Mucl	y Miner	al (F1) <b>(L</b>	RR O)		(outside	MLRA 150A)			
Stratified	Layers (A5)		Loamy Gley	ed Matri	x (F2)			Reduced \	/ertic (F18)			
Organic E	Bodies (A6) (LRR P,	T, U)	Depleted Ma	trix (F3)	1			(outside	MLRA 150A, 15	0B)		
5 cm Mud	cky Mineral (A7) (LR	R P, T, U	Redox Dark	Surface	(F6)			_Piedmont I	Floodplain Soils (	F19) <b>(LRR P, T)</b>		
Muck Pre	sence (A8) (LRR U)		Depleted Da	rk Surfa	ce (F7)			Anomalous Bright Floodplain Soils (F20)				
	ck (A9) <b>(LRR P, T)</b>		Redox Depr		(F8)			(MLRA 153B)				
-	Below Dark Surface	(A11)	Marl (F10) <b>(I</b>	-					t Material (F21)			
	rk Surface (A12)		Depleted Oc			-		-	ow Dark Surface			
	airie Redox (A16) (M	LRA 150			,		O, P, T)					
	osulfide (A18)		Umbric Surfa	,	· •		Other (Explain in Remarks)					
-	ucky Mineral (S1) (L	RR O, S)		. , .		•	EOD)	2				
-	eyed Matrix (S4)		Reduced Ve	•	, ·		•	Indicators	of hydrophytic ve	egetation and		
Sandy Re			Piedmont Fl				-					
	Matrix (S6) face (S7) <b>(LRR P, S</b> ,	T 11\	(MLRA 14	-	•	•	20)					
	e Below Surface (S8)		Very Shallov		•			wetland	hydrology must l	ne nresent		
(LRR S		,	(MLRA 13						listurbed or probl	-		
Restrictive L	ayer (if observed):											
Type:												
Depth (in	ches):						Hydric S	oil Present?	Yes	No <u> </u>		
Remarks:												
Hydric s	oil indicators	not o	bserved.									



Photograph 38: View of uplands at Data Point 20.



Photograph 39: View of non-hydric soil profile at Data Point 20.

## WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

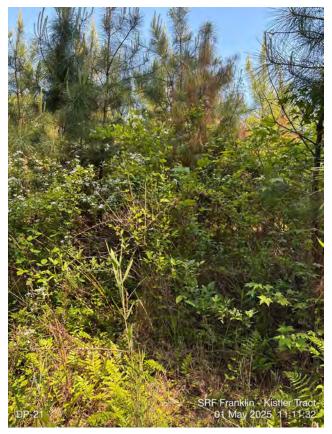
Project/Site: SRF Frankin - Kistler Tract City/County: Greensville County Sampling Date: 2025-05-01
Applicant/Owner: Otterdam Technology Group, LLC State: Virginia Sampling Point: DP-21
Investigator(s): Nikolai Karlov, Jackson Livingstone, Jillian Burgan, Kyle Zinn, WSSI Section, Township, Range:
Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 1
Subregion (LRR or MLRA): P 133A Lat: 36.80154486 Long: -77.52121092 Datum: NAD 83
Soil Map Unit Name: 40A - Woodington fine sandy loam, 0 to 2 percent slopes NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year?  Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes 🔽 No
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes V No Is the Sampled Area
Hydric Soil Present? Yes No within a Wetland? Yes No
Wetland Hydrology Present? Yes ✓ No
Remarks: Data point taken on edge of area with early to mid-successional growth present following
previous tree clearing. Multiple hydrology indicators and hummocky topography evident.
Conditions wetter than normal for this time of year.
HYDROLOGY
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6)
Surface Water (A1)  Aquatic Fauna (B13)  Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)  Marl Deposits (B15) (LRR U)  Drainage Patterns (B10)
Saturation (A3)  Hydrogen Sulfide Odor (C1)  Moss Trim Lines (B16)
Water Marks (B1)  Oxidized Rhizospheres on Living Roots (C3)  Dry-Season Water Table (C2)
Sediment Deposits (B2)  Presence of Reduced Iron (C4)  Crayfish Burrows (C8)  Presence of Reduced Iron (C4)  Crayfish Burrows (C8)
Drift Deposits (B3)Recent Iron Reduction in Tilled Soils (C6)Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)  Thin Muck Surface (C7)  Geomorphic Position (D2)  Other (Explain in Remarks)  Shallow Aguitated (D3)
Iron Deposits (B5) Other (Explain in Remarks) Shallow Aquitard (D3) Inundation Visible on Aerial Imagery (B7) FAC-Neutral Test (D5)
1 <del></del>
<u> </u>
Field Observations:
Surface Water Present? Yes V Depth (inches): 0
Water Table Present? Yes ✓ No Depth (inches): 10
Saturation Present? Yes _ No _ Depth (inches): 4 _ Wetland Hydrology Present? Yes _ No
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Describe Necorded Data (Stream gauge, monitoring well, aerial priotos, previous inspections), il available.
Remarks:
Wetland hydrology indicators observed.
wetland right loogy indicators observed.

Tree Stratum (Plot size: 30 ft r	Absolute Dominan % Cover Species?		Dominance Test worksheet:
1. Pinus taeda	2	<u>FAC</u>	Number of Dominant Species That Are OBL FACW or FAC: 6 (A)
2. Acer rubrum		FAC	That Are OBL, FACW, or FAC: 6 (A)
3.	<del></del>		Total Number of Dominant
4.	·	_	Species Across All Strata: 6 (B)
5.	·	_	Percent of Dominant Species
6.	· <del></del>	_	That Are OBL, FACW, or FAC: 100.00 (A/B)
700/ /	=Total Cove		Prevalence Index worksheet:
50% of total cover: 16.	20% of total cov	rer: 6.40	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 30 ft r )			OBL species 17 x 1 = 17
Pinus taeda	15	FAC	FACW species <u>60</u> x 2 = <u>120</u>
2			FAC species 71 x 3 = 213
3			FACU species <u>16</u> x 4 = <u>64</u>
4		_	UPL species 0 x 5 = 0
5	<u> </u>	_	Column Totals: 164 (A) 414 (B)
6	<del></del>		Prevalence Index = B/A = 2.52
	15 =Total Cove	er	Hydrophytic Vegetation Indicators:
50% of total cover: 7.5	20% of total cov	rer: 3.00	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30 ft r )			✓ 2 - Dominance Test is >50%
Morella cerifera	10	FAC	✓ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
2. Acer rubrum	2	FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3. Liquidambar styraciflua	2	FAC	_
4. Quercus phellos	2	FACW	
5.		_	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be
6.	· <del></del>		present, unless disturbed or problematic.
	16 =Total Cove	 er	Definitions of Five Vegetation Strata:
50% of total cover: 8.0	20% of total cov	rer: 3.20	Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 30 ft r )			approximately 20 ft (6 m) or more in height and 3 in.
Carex abscondita	20	FACW	(7.6 cm) or larger in diameter at breast height (DBH).
2. Juncus coriaceus	20 🗸	FACW	Canling Woody plants evaluding woody vines
Woodwardia areolata	15	OBL	Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
4. Arundinaria tecta	10	FACW	than 3 in. (7.6 cm) DBH.
5. Lonicera japonica	8	FACU	Shrub - Woody Plants, evaluding woody vines
	- <u>°</u>	FACU	Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
		FAC	
7. Rubus pensilvanicus	- 8		Herb – All herbaceous (non-woody) plants, including
8. Impatiens capensis	_ 5	FACW FACW	herbaceous vines, regardless of size, <u>and</u> woody plants, except woody vines, less than approximately 3
9. Eupatorium perfoliatum	_ 3		ft (1 m) in height.
10. Typha latifolia		OBL	Mandy Vine All woody vines regardless of height
11			Woody Vine – All woody vines, regardless of height.
	99 =Total Cove		
50% of total cover: 49	.50 20% of total cov	<sub>'er:</sub> 19.80	
Woody Vine Stratum (Plot size: 30 ft r )			
Smilax rotundifolia	2	FAC	
2	<del></del>		
3	<u> </u>	_	
4	<u></u>	_	
5		_	Hydrophytia
	2 =Total Cove	er	Hydrophytic Vegetation
50% of total cover: 1.0	0 20% of total cov	<sub>rer:</sub> 0.40	Present? Yes No
Remarks: (If observed, list morphological adaptati	ons below.)		<del></del>
	*		

Sampling Point: DP-21

T 0: :			Absolute	Dominant	Indicator	B 5 10 1 10 10 10 10 10 10 10 10 10 10 10 1
Tree Stratum			% Cover	Species?	Status	Definitions of Five Vegetation Strata:
7.						<b>Tree</b> – 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).
9.						
10 11.						Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
						than 3 in. (7.6 cm) DBH.
12			32	=Total Cover		Shrub - Woody Plants, excluding woody vines,
	50% of total cover:	16.0		of total cover:	6.40	approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum		10.0		o. 101a. 0010	0.10	Harb. All bank account (non-used it) plants including
7.						<b>Herb</b> – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, <u>and</u> woody
8.						plants, except woody vines, less than approximately 3
0				· ·		ft (1 m) in height.
10						Woody Vine – All woody vines, regardless of height.
12.						
			15	=Total Cover		
	50% of total cover:	7.50	20%	of total cover:	3.00	
Shrub Stratum	30 ft r					
7						
0						
9.						
10						
12						
				=Total Cover	0.00	
	50% of total cover:	8.00	20%	of total cover:	3.20	
Herb Stratum						
12.						
13.						
16						
17 18.						
19.						
20.						
21.						
22.						
			99	=Total Cover		
	50% of total cover:	49.5		of total cover:	19.80	
Woody Vine Stratum						
6.						
7.						
8.						
9.						
10.						
			2	=Total Cover		
	50% of total cover:	1.00	20%	of total cover:	0.40	
Remarks: (If observed, lis	st morphological ada	ptatior	ns below.)			

Profile Desc	ription: (Describe t	o the de	pth needed to docu	ıment tl	ne indica	tor or c	onfirm th	e absence d	of indica	tors.)		
Depth	Matrix		Redox	x Featur	es							
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Te	xture		Re	marks	3
0 - 2	10YR 3/2	100					Loam					
2 - 8	10YR 4/1	95	10YR 4/6	5	С		Loam	_				_
8 - 18	10YR 5/1	90	10YR 4/6	10	<u>C</u>	М	Loamy	Sand				
18 - 24	10YR 5/1	100					Sand					
_												
_												
¹Type: C=Co	ncentration, D=Depl	etion, RN	1=Reduced Matrix, N	/IS=Mas	ked Sand	d Grains		<sup>2</sup> Location: I	PL=Pore	Lining, M:	=Matr	ix.
Hydric Soil I	ndicators: (Applica	ble to all	LRRs, unless other	rwise n	oted.)			Indicators	for Prob	lematic H	ydric	Soils <sup>3</sup> :
Histosol	(A1)		Thin Dark Su	ırface (S	9) <b>(LRR</b>	S, T, U)		1 cm M	uck (A9)	(LRR O)		
Histic Ep	ipedon (A2)		Barrier Island	ds 1 cm	Muck (S	12)		2 cm M	uck (A10	) (LRR S)		
Black His	tic (A3)		(MLRA 15	3B, 153	D)			Coast F	Prairie Re	edox (A16)	)	
	n Sulfide (A4)		Loamy Muck	y Miner	al (F1) <b>(L</b>	RR O)		(outs	ide MLR	A 150A)		
	Layers (A5)		Loamy Gleye						ed Vertic			
_	Bodies (A6) (LRR P,	-	✓ Depleted Ma					-		A 150A, 1	-	
	cky Mineral (A7) (LR				` '							) (LRR P, T)
	esence (A8) (LRR U)		Depleted Da						_	ht Floodpl	ain So	oils (F20)
	ck (A9) <b>(LRR P, T)</b>	(0.4.4)	Redox Depre		(F8)		(MLRA 153B) ——Red Parent Material (F21)					
	Below Dark Surface	(A11)	Marl (F10) <b>(L</b>	-	() (B. 1) D. (					` ′		2)
	rk Surface (A12)	I D A 450	Depleted Oc			-	O D T)	Very Shallow Dark Surface (F22)  D, P, T) (outside MLRA 138, 152A in FL, 154)				
	airie Redox (A16) ( <b>M</b> osulfide (A18)	LKA 150			,					4 IN FL, 154)		
	ucky Mineral (S1) <b>(L</b> l	DD () ()	Umbric Surfa  Delta Ochric			-	Other (Explain in Remarks)					
-	eyed Matrix (S4)	KK 0, 3)	Reduced Ve			•	50B) <sup>3</sup> Indicators of hydrophytic vegetation and					
Sandy Re			Piedmont Flo	•					OIS OI IIY	uropriyuc	veget	ation and
-	Matrix (S6)		Anomalous E				-					
	face (S7) <b>(LRR P, S,</b>	T, U)	(MLRA 14	-			-,					
	e Below Surface (S8)	-	Very Shallow		-			wetla	nd hydro	ology must	t be p	resent,
	S, T, U)		(MLRA 13				unless disturbed or problematic.					
Restrictive L	ayer (if observed):											
Type:												
	ches):						Hydri	c Soil Prese	nt?	Yes_	<u>_</u> _	No
Remarks:												
Hydric s	oil indicator F	-3 obs	served.									



Photograph 40: View of scrub/shrub wetlands at Data Point 21.



Photograph 41: View of hydric soil profile at Data Point 21.

### WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Frankin - Kistler Tract	City/County	:Greensville County	Sampling Date: 2025-05-01				
Applicant/Owner: Otterdam Technology Group, L			ia Sampling Point: DP-22				
Investigator(s): Nikolai Karlov, Jackson Livingstone, Jillian Burgan, Kyle Zinn,							
Landform (hillside, terrace, etc.): Hillslope		ve, convex, none): Linear	Slope (%): <b>3</b>				
Subregion (LRR or MLRA): P 133A Lat: 36.802		Long: -77.5216031	Datum: NAD 83				
Soil Map Unit Name: 40A - Woodington fine sandy lo							
Are climatic / hydrologic conditions on the site typical for this time	-		, explain in Remarks.)				
Are Vegetation, Soil, or Hydrologysignificar		e "Normal Circumstances" preser	nt? Yes 🗸 No				
Are Vegetation, Soil, or Hydrologynaturally	problematic? (If	needed, explain any answers in F	Remarks.)				
SUMMARY OF FINDINGS – Attach site map show	ing sampling po	int locations, transects, in	mportant features, etc.				
Hydrophytic Vegetation Present? Yes Vo	Is the Sam	pled Area					
Hydric Soil Present? Yes No	within a We	etland? Yes	No 🔽				
Wetland Hydrology Present? Yes No 🗸	<u>-</u>						
Remarks: Data point taken on a hillslope with early	to mid-succe	essional growth prese	ent following				
previous tree clearing. Dominated by you	ung Loblolly p	ine, no hydric soils o	r wetland				
hydrology observed. Conditions wetter t							
,		,					
HYDROLOGY							
Wetland Hydrology Indicators:		Secondary Indicators	s (minimum of two required)				
Primary Indicators (minimum of one is required; check all that ap	oply)	Surface Soil Cra	cks (B6)				
Surface Water (A1) Aquatic Fauna	` '	Sparsely Vegetated Concave Surfa					
High Water Table (A2)  Marl Deposits (							
Saturation (A3) Hydrogen Sulfic							
<del></del>	· -	s on Living Roots (C3) Dry-Season Water Table (C2)					
	educed Iron (C4) eduction in Tilled Soils						
Algal Mat or Crust (B4)  Thin Muck Surf							
Iron Deposits (B5)  Other (Explain							
Inundation Visible on Aerial Imagery (B7)	,	FAC-Neutral Test (D5)					
Water-Stained Leaves (B9)			s (D8) (LRR T, U)				
Field Observations:							
Surface Water Present? Yes No Depth	(inches):						
Water Table Present? Yes No Depth	(inches):						
Saturation Present? Yes No V Depth	(inches):	Wetland Hydrology Present?	Yes No <u>✔</u>				
(includes capillary fringe)							
Describe Recorded Data (stream gauge, monitoring well, aerial p	photos, previous inspe	ections), if available:					
Remarks:							
No water table or saturation observed wi	ithin 24 inche	s from the ground su	ırface.				

<b>VEGETATION</b>	(Five Strata) -	Use scientific names	of plants

Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
60		FAC	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: 100.00 (A/B)
	=Total Cover		Prevalence Index worksheet:
<b>).00</b> 20%	of total cover:	12.00	Total % Cover of: Multiply by:
			OBL species <u>0</u> x 1 = <u>0</u>
			FACW species <u>5</u> x 2 = <u>10</u>
			FAC species <u>92</u> x 3 = <u>276</u>
			FACU species 11 x 4 = 44
_			UPL species $0   x 5 = 0$
			Column Totals: 108 (A) 330 (B)
			Prevalence Index = B/A = 3.05
	=Total Cover		Hydrophytic Vegetation Indicators:
20%	of total cover:		1 - Rapid Test for Hydrophytic Vegetation
			✓ 2 - Dominance Test is >50%
2		FAC	3 - Prevalence Index is ≤3.0 <sup>1</sup>
<del>2</del>			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
		1700	resistance repension regulation (Explain)
			<sup>1</sup> Indicators of hydric soil and wetland hydrology must be
			present, unless disturbed or problematic.
			Definitions of Five Vegetation Strata:
00 20%	of total cover:	0.80	Tree – Woody plants, excluding woody vines,
			approximately 20 ft (6 m) or more in height and 3 in.
<u>25</u>		FAC	(7.6 cm) or larger in diameter at breast height (DBH).
5		FACU	Sapling – Woody plants, excluding woody vines,
5		FACW	approximately 20 ft (6 m) or more in height and less
2		FACU	than 3 in. (7.6 cm) DBH.
2		FACU	Shrub - Woody Plants, excluding woody vines,
			approximately 3 to 20 ft (1 to 6 m) in height.
			Harb All barbaras (can was the state Sadus Para
			<b>Herb</b> – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, <u>and</u> woody
			plants, except woody vines, less than approximately 3
			ft (1 m) in height.
			Woody Vine – All woody vines, regardless of height.
	T-1-1-0		Trocay time 7 in vicesy times, regardless of meight.
		7.00	
<u>1.50                                    </u>	of total cover:	7.80	
) _			
_ 5		FAC	
			Hydrophytic
5	=Total Cover		Hydrophytic Vegetation
	60 60 0.00 20% 20% 20% 20% 20% 25 5 5 2 2	60 =Total Cover 0.00 20% of total cover:  =Total Cover 20% of total cover:  2 2 2 2 3 5 5 5 2 2 2   Total Cover:  25	60 FAC  60 =Total Cover 0.00 20% of total cover: 12.00  =Total Cover 20% of total cover:  2 FAC FACU  4 =Total Cover 20% of total cover: 0.80  25 FACU 5 FACU 5 FACU 7 FACU 5 FACU 7 FACU 7 FACU 7 FACU 8 FACU 9 FACU 9 FACU 7 FAC

Tree Stratum		Absolute	Dominant Species?	Indicator Status	Definitions of Five Vegetation Strate.
<del></del>		% Cover	Species?	Status	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,
11.					approximately 20 ft (6 m) or more in height and less
					than 3 in. (7.6 cm) DBH.
		60	=Total Cover		Shrub - Woody Plants, excluding woody vines,
	50% of total cover: 30.0	20%	of total cover:	12.00	approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum					Herb – All herbaceous (non-woody) plants, including
7					herbaceous vines, regardless of size, <u>and</u> woody
•					plants, except woody vines, less than approximately 3
9					ft (1 m) in height.
10					Woody Vine – All woody vines, regardless of height.
11					
12					
			=Total Cover		
	50% of total cover:	20%	of total cover:		
Shrub Stratum	30 ft r				
4.4					
12.	_	4	=Total Cover		
	50% of total cover: 2.00		of total cover:	0.80	
Herb Stratum					
14.					
15.					
16.					
17					
19.					
21					
22					
	40 F		=Total Cover	7.00	
W 1 V" 0: 1	50% of total cover: 19.5	<u>0</u> 20%	of total cover:	7.80	
Woody Vine Stratum					
7. 8.					
9.					
10.					
10.		5	=Total Cover		
	50% of total cover: 2.50		of total cover:	1.00	
Remarks: (If observed 1	ist morphological adaptation		. 5. 15101 00 01.	<u></u>	
. tomanto. (ii observed, i		2010 14./			

Profile Desc	ription: (Describe t	o the dept	h needed to docւ	ıment t	he indic	ator or c	onfirm th	ne absence o	of indica	ators.)	
Depth	Matrix		Redox	x Featu	res						
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Te	exture		Rem	arks
0 - 1	10YR 5/3	100					Loamy	/ Sand			
1 - 20	2.5Y 5/4	90					Sand				
1 - 20	2.5Y 6/3	10					Sand				
20 - 24	2.5Y 6/3	100					Sand				
								_			
<sup>1</sup> Type: C=Co	ncentration, D=Depl	etion, RM=	Reduced Matrix, M	/IS=Mas	sked San	d Grains		<sup>2</sup> Location: I	PL=Pore	Lining, M=N	Matrix.
Hydric Soil I	ndicators: (Applica	ble to all L	RRs, unless othe	rwise r	noted.)			Indicators	for Prob	lematic Hyd	dric Soils³:
Histosol	(A1)		Thin Dark Su	urface (S	39) <b>(LRR</b>	S, T, U)		1 cm M	uck (A9)	(LRR O)	
Histic Ep	ipedon (A2)		Barrier Island	ds 1 cm	Muck (S	12)		2 cm M	uck (A10	0) <b>(LRR S)</b>	
Black His			(MLRA 15	3B, 153	3D)			Coast F	Prairie R	edox (A16)	
	n Sulfide (A4)		Loamy Muck			RR O)		•		RA 150A)	
	Layers (A5)		Loamy Gleye						ed Vertic		
-	Bodies (A6) (LRR P,	-	Depleted Ma	` '						RA 150A, 15	
	cky Mineral (A7) (LR		Redox Dark		` '						F19) <b>(LRR P, T)</b>
	esence (A8) (LRR U)		Depleted Da		` '				-		n Soils (F20)
	ck (A9) (LRR P, T)	(444)	Redox Depre		(F8)			(MLRA 153B) ——Red Parent Material (F21)			
-	Below Dark Surface rk Surface (A12)	: (A11)	Marl (F10) (L	-	1) /MI D	A 151\		— Very Shallow Dark Surface (F22)			
	airie Redox (A16) ( <b>M</b>	II DA 150A	Depleted Oct			-					
	osulfide (A18)	LIVA 130A	Umbric Surface (F13) (LRR P, T, U)				Other (Explain in Remarks)				
	ucky Mineral (S1) <b>(L</b>	RR O S)	Delta Ochric			-				ii i (Cilialiko)	
-	eyed Matrix (S4)	0, 0,	Reduced Ver			•	50B)	<sup>3</sup> Indicat	ore of hy	dronhytic ve	egetation and
Sandy Re			Piedmont Flo	•			•		013 01 119	raiopilytic ve	getation and
-	Matrix (S6)		Anomalous E				-				
	face (S7) (LRR P, S,	T, U)	(MLRA 14	_			-,				
	e Below Surface (S8)	-	Very Shallow	•	•	•		wetla	and hydro	ology must b	e present,
(LRR S			(MLRA 13						•	ped or proble	•
Restrictive L	ayer (if observed):										
Type:	ala a a V							- 0-" D	10	V	N- 4/
	ches):						Hydri	c Soil Prese	ent?	Yes	No
Remarks:											
Hydric s	oil indicators	not ob	served.								



Photograph 42: View of uplands at Data Point 22.



Photograph 43: View of non-hydric soil profile at Data Point 22.

## WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Frankin - Kistler T	ract	City/County: Greens	ville County	Sampling Date: 2025-05-01			
Applicant/Owner: Otterdam Techno	logy Group, LLC			Sampling Point: DP-23			
Investigator(s): Nikolai Karlov, Jackson Livingstone,	Jillian Burgan, Kyle Zinn, WSSI Sec	tion, Township, Range:		<u>-</u>			
Landform (hillside, terrace, etc.): Hillslope		relief (concave, convex,	none): Linear	Slope (%): 5			
Subregion (LRR or MLRA): P 133A			77.52354575	Datum: NAD 83			
Soil Map Unit Name: 10B3 - Craven clay							
Are climatic / hydrologic conditions on the site	typical for this time of year?	Yes	No _ (If no, e	explain in Remarks.)			
Are Vegetation, Soil, or Hydrold	ogysignificantly disturb	bed? Are "Normal C	Circumstances" present?	Yes V No No			
Are Vegetation, Soil, or Hydrold	ogynaturally problema	atic? (If needed, ex	plain any answers in Re	emarks.)			
SUMMARY OF FINDINGS – Attach	site map showing sam	npling point locati	ons, transects, im	portant features, etc.			
Hydrophytic Vegetation Present?	Yes No	Is the Sampled Area					
Hydric Soil Present?	Yes No 🗸	within a Wetland?	Yes	No 🗸			
Wetland Hydrology Present?	Yes No V						
Remarks: Data point taken on a hillslop		odplain and str	eam svstem, s	oils not hydric			
and no saturation observed.		-	•	-			
allu ilo saturation observed.	Conditions wetter	i tiiaii iloiiliai i	נ ונו שווום נוווים נו	/ear.			
HYDROLOGY							
Wetland Hydrology Indicators:				(minimum of two required)			
Primary Indicators (minimum of one is require			Surface Soil Crack				
Surface Water (A1)	Aquatic Fauna (B13)		Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2)	Marl Deposits (B15) (LRI		Drainage Patterns				
Saturation (A3)	Hydrogen Sulfide Odor (		Moss Trim Lines (	·			
Water Marks (B1)	Oxidized Rhizospheres of	= : :	Dry-Season Water				
Sediment Deposits (B2)	Presence of Reduced Iro	` ,	Crayfish Burrows				
Drift Deposits (B3)	Recent Iron Reduction in			on Aerial Imagery (C9)			
Algal Mat or Crust (B4)	Thin Muck Surface (C7)		Geomorphic Posit	` '			
Iron Deposits (B5)	Other (Explain in Remark	rks)	Shallow Aquitard (	` '			
Inundation Visible on Aerial Imagery (B7)	1		FAC-Neutral Test	, ,			
Water-Stained Leaves (B9)		T	Sphagnum Moss (	(D8) (LRR 1, U)			
Field Observations:	N <b>V</b> 5 ((())						
	No Depth (inches):						
	No Depth (inches):						
Saturation Present? Yes	No <u>✓</u> Depth (inches):	Wetland	Hydrology Present?	Yes No V			
(includes capillary fringe)	nitoring wall porial photos pr	rovious inspections) if s	voilable				
Describe Recorded Data (stream gauge, mor	litoring well, aeriai photos, pre	revious inspections), if a	valiable:				
Remarks:							
<u>.</u>				•			
No water table or saturation	observed within 2	24 inches from	the ground sur	face.			

				Sampling Point: DP-23
Tree Stratum (Plot size: 30 ft r )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Liriodendron tulipifera	25	~	FACU	Number of Dominant Species
2. Pinus taeda	12		FAC	That Are OBL, FACW, or FAC: 5 (A)
3. Liquidambar styraciflua	2		FAC	
4.			1710	Total Number of Dominant Species Across All Strata:  9 (B)
5 6.				Percent of Dominant Species That Are OBL, FACW, or FAC: 55.55 (A/B)
	39	=Total Cover		Prevalence Index worksheet:
50% of total cover: 19.5	20%	of total cover:	7.8	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 30 ft r )				OBL species 0 $x = 0$
1. Acer rubrum	5	<b>✓</b>	FAC	FACW species $0$ $x 2 = 0$
2. Liriodendron tulipifera	5		FACU	FAC species 36 x 3 = 108
3. Quercus falcata	5		FACU	FACU species 48
4. Fraxinus americana	2		FACU	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
·	2		FAC	
5. <u>Ilex opaca</u> 6.			FAC	Column Totals: 84 (A) $300$ (B)  Prevalence Index = B/A = $3.57$
	19	=Total Cover		Hydrophytic Vegetation Indicators:
500/ of total agrees Q.5			20	
50% of total cover: 9.5	20%	of total cover:	3.0	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30 ft r	_			2 - Dominance Test is >50%
1. Liquidambar styraciflua	5		FAC	3 - Prevalence Index is ≤3.0 <sup>1</sup>
2. Vaccinium formosum	2		FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.				
4				
 5.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be
6.				present, unless disturbed or problematic.
<u> </u>	7	=Total Cover		Definitions of Five Vegetation Strata:
50% of total cover: 3.5		of total cover:	1.4	
Herb Stratum (Plot size: 30 ft r )		or total cover.		Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
	0		EAO	(7.6 cm) or larger in diameter at breast height (DBH).
	8		FAC	
2. Lonicera japonica	5		FACU	Sapling – Woody plants, excluding woody vines,
3. Podophyllum peltatum	2		FACU	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
4. Polygonatum biflorum	2		FACU	man o m. (7.5 om) BBM.
5. Solidago altissima	2		FACU	<b>Shrub -</b> Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
6		-		approximatory of to 20 ft (1 to 0 fm) in noight.
7				Herb - All herbaceous (non-woody) plants, including
8				herbaceous vines, regardless of size, and woody
9				plants, except woody vines, less than approximately 3 ft (1 m) in height.
10				
11				Woody Vine – All woody vines, regardless of height.
	19	=Total Cover		
50% of total cover: 9.5	20%	of total cover:	3.8	
Woody Vine Stratum (Plot size: 30 ft r )				
1.				
2.				
3.				
4				
5				Hydrophytic
	:	=Total Cover		Vegetation
		of total cover:		Present? Yes No

T 0: 1		Absolute	Dominant	Indicator	
Tree Stratum		% Cover	Species?	Status	Definitions of Five Vegetation Strata:
7.					Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
8. 9.					(7.6 cm) or larger in diameter at breast height (DBH).
10					
					Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
					than 3 in. (7.6 cm) DBH.
12.		39	=Total Cover		Shrub - Woody Plants, excluding woody vines,
	50% of total cover: <b>19.5</b>		of total cover:	7.8	approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum	10.0		o or total cover.	7.0	
					<b>Herb</b> – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, <u>and</u> woody
					plants, except woody vines, less than approximately 3
0					ft (1 m) in height.
					Woody Vine – All woody vines, regardless of height.
		19	=Total Cover		
	50% of total cover: 9.5		6 of total cover:	3.8	
Shrub Stratum	30 ft r				
7.					
Q					
4.4					
12.					
		7	=Total Cover		
	50% of total cover: 3.5	20%	of total cover:	1.4	
Herb Stratum					
12.					
10					
14					
15					
16					
17					
18					
19					
20					
21					
22					
		19	=Total Cover		
	50% of total cover: 9.5	20%	of total cover:	3.8	
Woody Vine Stratum					
6.					
7					
8					
9.					
10		-	·		
			=Total Cover		
	50% of total cover:		6 of total cover:		
Remarks: (If observed, I	ist morphological adaptation	ns below.)			

Profile Desc	ription: (Describe	to the depth	needed to docu	ıment t	he indica	tor or c	onfirm the absen	ce of indic	ators.)		
Depth	Matrix		Redo	x Featur							
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Rem	arks	
0 - 4	10YR 4/2	100					Sandy Loam				
4 - 16	10YR 6/4	100					Loamy Sand	Hit re	estrictive la	ayer at 16	
-											
								_			
¹Type: C=Co	oncentration, D=Dep	etion RM=R	educed Matrix N	MS=Mas	ked Sand		<sup>2</sup> l ocatio	n: PI =Por	e Lining, M=N	//atrix	
	ndicators: (Applica					a Oramo.			blematic Hy		
Histosol		_	Thin Dark Su		-	S, T, U)		n Muck (A9	_		
	ipedon (A2)	-	Barrier Island	,	, ,		· <u></u>		0) <b>(LRR S)</b>		
Black His	stic (A3)		(MLRA 15	3B, 153	(D)		Coa	st Prairie R	ledox (A16)		
Hydroge	n Sulfide (A4)	_	Loamy Muck	y Miner	al (F1) <b>(L</b>	RR O)	(o	utside ML	RA 150A)		
Stratified	Layers (A5)	-	Loamy Gleye	ed Matri	x (F2)		Rec	uced Vertic	(F18)		
Organic	Bodies (A6) (LRR P,	T, U)	Depleted Ma				(0	utside ML	RA 150A, 15	0B)	
5 cm Mu	cky Mineral (A7) <b>(LR</b>	R P, T, U)	Redox Dark	Surface	(F6)		Pied	dmont Floo	dplain Soils (	F19) <b>(LRR P</b>	, T)
	esence (A8) (LRR U)		Depleted Da						ght Floodplai	n Soils (F20)	
	ck (A9) (LRR P, T)	-	Redox Depre		(F8)		-	ILRA 153B	-		
-	Below Dark Surface	(A11)	Marl (F10) <b>(L</b>	-	4) <b>(84) D</b> (	454			iterial (F21)	(F00)	
	rk Surface (A12)	U DA 450A\	Depleted Ochric (F11) (MLRA 151) Very Shallow Dark Surface (F22)  A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in							154\	
	airie Redox (A16) ( <b>N</b> iosulfide (A18)	ILKA ISUA)	Umbric Surfa				•	-	in Remarks)	ISZA III FL,	134)
	lucky Mineral (S1) <b>(L</b>	RR O S)	Delta Ochric		-			ei (Expiairi	iii ixeiliaiks)		
-	leyed Matrix (S4)	0, 0,	Reduced Ve				<b>50B)</b> 3Ind	icators of h	ydrophytic ve	agetation and	ı
Sandy R		-	Piedmont Flo	•				icators or ri	yaropriyiic ve	getation and	'
-	Matrix (S6)	-	Anomalous I				-				
	face (S7) (LRR P, S	, T, U)	(MLRA 14	_			,				
Polyvalu	e Below Surface (S8	)	Very Shallov	Dark S	Surface (F	22)	W	etland hyd	rology must b	e present,	
(LRR	S, T, U)	·-	(MLRA 13	8, 152A	in FL, 1	54)	u	nless distui	bed or proble	ematic.	
Restrictive I	_ayer (if observed):										
Type:											
Depth (ir	nches):						Hydric Soil Pr	esent?	Yes	No_ <u></u>	_
Remarks:											
Hydric s	oil indicators	not obs	served.								



Photograph 44: View of uplands at Data Point 23.



Photograph 45: View of non-hydric soil profile at Data Point 23.

## WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Franklin - Kistler Tract City/County: Greensville County Sampling Date: 202	5-05-01
Applicant/Owner: Otterdam Technology Group, LLC State: Virginia Sampling Point: DF	
Investigator(s): Nikolai Karlov, Jackson Livingstone, Jillian Burgan, WSSI Section, Township, Range:	
Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 1	
Subregion (LRR or MLRA): P 133A Lat: 36.80001494 Long: -77.51881163 Datum: NA	D 83
Soil Map Unit Name: 10B3 - Craven clay loam, 2 to 6 percent slopes, severely eroded NWI classification: None	
Are climatic / hydrologic conditions on the site typical for this time of year?  Yes  No  (If no, explain in Remarks.)	
<del>_</del>	
Are Vegetation, Soil, or Hydrologynaturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS Attach site man showing sampling point locations, transacts, important features.	- 010
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features	, etc.
Hydrophytic Vegetation Present?  Yes No Is the Sampled Area	ļ
Hydric Soil Present? Yes No within a Wetland? Yes No v	ļ
Wetland Hydrology Present? Yes No V	
Remarks: Data point sampled in an upland area located along a plateau. The area appeared to have	<u>,</u>
been very recently clear-cut. Based on the large-scale removal of existing vegetation, th	is is
not considered a Normal Condition. Conditions wetter than normal for this time of year.	
The Considered a Normal Condition. Conditions wetter than normal for this time of Joan.	l
L HYDROLOGY	
Wetland Hydrology Indicators:  Secondary Indicators (minimum of two requ	ired)
Primary Indicators (minimum of one is required; check all that apply)  Surface Soil Cracks (B6)	<del>,</del>
Surface Water (A1)Aquatic Fauna (B13)Sparsely Vegetated Concave Surface (I	38)
High Water Table (A2)  Marl Deposits (B15) (LRR U)  Drainage Patterns (B10)	
Saturation (A3) Hydrogen Sulfide Odor (C1) Moss Trim Lines (B16)	
Water Marks (B1) Oxidized Rhizospheres on Living Roots (C3) Dry-Season Water Table (C2)	
Sediment Deposits (B2) Presence of Reduced Iron (C4) Crayfish Burrows (C8)	
Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9	<del>)</del> )
Algal Mat or Crust (B4) Thin Muck Surface (C7) Geomorphic Position (D2)	
Iron Deposits (B5) Other (Explain in Remarks) Shallow Aquitard (D3)	
Inundation Visible on Aerial Imagery (B7)FAC-Neutral Test (D5)	
Water-Stained Leaves (B9)Sphagnum Moss (D8) (LRR T, U)	
Field Observations:	l
Surface Water Present? Yes No Depth (inches):	ļ
Water Table Present? Yes No Depth (inches):	
Saturation Present? Yes No Depth (inches): 23 Wetland Hydrology Present? Yes No No_	
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Describe Recorded Bala (officially gauge, mornioning work, acrial pricted, provided mappediaties), in analysis	ļ
Remarks:	
No water table observed within 24 inches of the ground surface. Soils appeared lightly	
saturated at 23 inches.	
outurated at 20 mones.	

Tree Stratum (Plot size: 30 ft r	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1.				Number of Dominant Species
2.				That Are OBL, FACW, or FAC: 1 (A)
3				Total Number of Dominant Species Across All Strata: 4 (B)
5				
6.				Percent of Dominant Species That Are OBL, FACW, or FAC: 25.00 (A/B)
		=Total Cover		Prevalence Index worksheet:
50% of total cover:	20%	of total cover:		Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 30 ft r )				OBL species 0 x 1 = 0
1.				FACW species 0 x 2 = 0
2.				FAC species 7 x 3 = 21
3.				FACU species $8   x 4 = 32$
4.				UPL species $0   x 5 = 0$
5.				Column Totals: 15 (A) 53 (B)
6.				Prevalence Index = B/A = 3.53
		=Total Cover		Hydrophytic Vegetation Indicators:
50% of total cover:		of total cover:		1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30 ft r )		or total cover.		2 - Dominance Test is >50%
				3 - Prevalence Index is ≤3.0¹
				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
				Problematic Hydrophytic Vegetation (Explain)
3.				
4.				
5.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be
6		<del></del>		present, unless disturbed or problematic.
		=Total Cover		Definitions of Five Vegetation Strata:
50% of total cover:		of total cover		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 30 ft r )				<b>Tree</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
Herb Stratum (Plot size: 30 ft r )  1. Acer rubrum	20%	of total cover:	FAC	Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 30 ft r )  1. Acer rubrum  2. Lonicera japonica	20% 3 2	of total cover:	FAC FACU	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,
Herb Stratum (Plot size: 30 ft r )  1. Acer rubrum  2. Lonicera japonica  3. Oxydendrum arboreum	20%	of total cover:	FAC	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
Herb Stratum (Plot size: 30 ft r )  1. Acer rubrum 2. Lonicera japonica 3. Oxydendrum arboreum 4. Quercus falcata	20% 3 2	of total cover:	FACU FACU FACU	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,
Herb Stratum (Plot size: 30 ft r )  1. Acer rubrum  2. Lonicera japonica  3. Oxydendrum arboreum  4. Quercus falcata  5. Carpinus caroliniana	20% 3 2 2	of total cover:	FACU FACU FACU FACU	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,
Herb Stratum (Plot size: 30 ft r )  1. Acer rubrum 2. Lonicera japonica 3. Oxydendrum arboreum 4. Quercus falcata	20% 3 2 2	of total cover:	FACU FACU FACU	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.
Herb Stratum (Plot size: 30 ft r )  1. Acer rubrum  2. Lonicera japonica  3. Oxydendrum arboreum  4. Quercus falcata  5. Carpinus caroliniana	20% 3 2 2	of total cover:	FACU FACU FACU FACU	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,
Herb Stratum (Plot size: 30 ft r )  1. Acer rubrum  2. Lonicera japonica  3. Oxydendrum arboreum  4. Quercus falcata  5. Carpinus caroliniana  6. Chasmanthium latifolium	20% 3 2 2	of total cover:	FACU FACU FACU FACU FAC	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
Herb Stratum (Plot size: 30 ft r )  1. Acer rubrum  2. Lonicera japonica  3. Oxydendrum arboreum  4. Quercus falcata  5. Carpinus caroliniana  6. Chasmanthium latifolium  7. Eupatorium rotundifolium	20% 3 2 2	of total cover:	FACU FACU FACU FACU FAC FAC	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
Herb Stratum (Plot size: 30 ft r )  1. Acer rubrum  2. Lonicera japonica  3. Oxydendrum arboreum  4. Quercus falcata  5. Carpinus caroliniana  6. Chasmanthium latifolium  7. Eupatorium rotundifolium  8. Liquidambar styraciflua	20% 3 2 2	of total cover:	FACUFACUFACUFACFACFACFAC	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.
Herb Stratum (Plot size: 30 ft r )  1. Acer rubrum  2. Lonicera japonica  3. Oxydendrum arboreum  4. Quercus falcata  5. Carpinus caroliniana  6. Chasmanthium latifolium  7. Eupatorium rotundifolium  8. Liquidambar styraciflua  9. Liriodendron tulipifera	20% 3 2 2	of total cover:	FAC FACU FACU FAC FAC FAC FAC FAC FAC	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
Herb Stratum (Plot size: 30 ft r )  1. Acer rubrum  2. Lonicera japonica  3. Oxydendrum arboreum  4. Quercus falcata  5. Carpinus caroliniana  6. Chasmanthium latifolium  7. Eupatorium rotundifolium  8. Liquidambar styraciflua  9. Liriodendron tulipifera  10. Phytolacca americana	20%  3 2 2 2 1 1 1 1 1 1	of total cover:	FAC FACU FACU FAC FAC FAC FAC FAC FAC	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.
Herb Stratum (Plot size: 30 ft r )  1. Acer rubrum  2. Lonicera japonica  3. Oxydendrum arboreum  4. Quercus falcata  5. Carpinus caroliniana  6. Chasmanthium latifolium  7. Eupatorium rotundifolium  8. Liquidambar styraciflua  9. Liriodendron tulipifera  10. Phytolacca americana	20%  3 2 2 2 1 1 1 1 1 1 1 15	of total cover:	FACUFACUFACUFACFACFACFACFACUFACUFACUFACU	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.
Herb Stratum (Plot size: 30 ft r )  1. Acer rubrum  2. Lonicera japonica  3. Oxydendrum arboreum  4. Quercus falcata  5. Carpinus caroliniana  6. Chasmanthium latifolium  7. Eupatorium rotundifolium  8. Liquidambar styraciflua  9. Liriodendron tulipifera  10. Phytolacca americana  11.	20%  3 2 2 2 1 1 1 1 1 1 1 15	of total cover:	FACUFACUFACUFACFACFACFACFACUFACUFACUFACU	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.
Herb Stratum (Plot size: 30 ft r )  1. Acer rubrum  2. Lonicera japonica  3. Oxydendrum arboreum  4. Quercus falcata  5. Carpinus caroliniana  6. Chasmanthium latifolium  7. Eupatorium rotundifolium  8. Liquidambar styraciflua  9. Liriodendron tulipifera  10. Phytolacca americana  11.	20%  3 2 2 2 1 1 1 1 1 1 1 15	of total cover:	FACUFACUFACUFACFACFACFACFACUFACUFACUFACU	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.
Herb Stratum (Plot size: 30 ft r )  1. Acer rubrum 2. Lonicera japonica 3. Oxydendrum arboreum 4. Quercus falcata 5. Carpinus caroliniana 6. Chasmanthium latifolium 7. Eupatorium rotundifolium 8. Liquidambar styraciflua 9. Liriodendron tulipifera 10. Phytolacca americana 11.  50% of total cover: 7.50  Woody Vine Stratum (Plot size: 30 ft r ) 1.	20%  3 2 2 2 1 1 1 1 1 1 1 15	of total cover:	FACUFACUFACUFACFACFACFACFACUFACUFACUFACU	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.
Herb Stratum (Plot size: 30 ft r )  1. Acer rubrum  2. Lonicera japonica 3. Oxydendrum arboreum 4. Quercus falcata 5. Carpinus caroliniana 6. Chasmanthium latifolium 7. Eupatorium rotundifolium 8. Liquidambar styraciflua 9. Liriodendron tulipifera 10. Phytolacca americana 11.  50% of total cover: 7.50  Woody Vine Stratum (Plot size: 30 ft r ) 1.	20%  3 2 2 2 1 1 1 1 1 1 1 15	of total cover:	FACUFACUFACUFACFACFACFACFACUFACUFACUFACU	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.
Herb Stratum (Plot size: 30 ft r )  1. Acer rubrum  2. Lonicera japonica 3. Oxydendrum arboreum 4. Quercus falcata 5. Carpinus caroliniana 6. Chasmanthium latifolium 7. Eupatorium rotundifolium 8. Liquidambar styraciflua 9. Liriodendron tulipifera 10. Phytolacca americana 11.  50% of total cover: 7.50  Woody Vine Stratum (Plot size: 30 ft r ) 1. 2. 3.	20%  3 2 2 2 1 1 1 1 1 1 1 15	of total cover:	FACUFACUFACUFACFACFACFACFACUFACUFACUFACU	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.
Herb Stratum (Plot size: 30 ft r )  1. Acer rubrum  2. Lonicera japonica 3. Oxydendrum arboreum 4. Quercus falcata 5. Carpinus caroliniana 6. Chasmanthium latifolium 7. Eupatorium rotundifolium 8. Liquidambar styraciflua 9. Liriodendron tulipifera 10. Phytolacca americana 11.  50% of total cover: 7.50  Woody Vine Stratum (Plot size: 30 ft r ) 1. 2. 3. 4.	20%  3 2 2 2 1 1 1 1 1 1 1 15	of total cover:	FACUFACUFACUFACFACFACFACFACUFACUFACUFACU	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.
Herb Stratum (Plot size: 30 ft r )  1. Acer rubrum  2. Lonicera japonica 3. Oxydendrum arboreum 4. Quercus falcata 5. Carpinus caroliniana 6. Chasmanthium latifolium 7. Eupatorium rotundifolium 8. Liquidambar styraciflua 9. Liriodendron tulipifera 10. Phytolacca americana 11.  50% of total cover: 7.50  Woody Vine Stratum (Plot size: 30 ft r ) 1. 2. 3.	20%  3 2 2 2 1 1 1 1 1 1 1 5 20%	of total cover:	FACUFACUFACUFACFACFACFACFACUFACUFACUFACU	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.
Herb Stratum (Plot size: 30 ft r )  1. Acer rubrum  2. Lonicera japonica 3. Oxydendrum arboreum 4. Quercus falcata 5. Carpinus caroliniana 6. Chasmanthium latifolium 7. Eupatorium rotundifolium 8. Liquidambar styraciflua 9. Liriodendron tulipifera 10. Phytolacca americana 11.  50% of total cover: 7.50  Woody Vine Stratum (Plot size: 30 ft r ) 1. 2. 3. 4. 5.	20%  3 2 2 1 1 1 1 1 1 1 20%	=Total Cover	FAC FACU FACU FAC FAC FAC FAC FAC FAC FACU FACU	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.
Herb Stratum (Plot size: 30 ft r )  1. Acer rubrum  2. Lonicera japonica 3. Oxydendrum arboreum 4. Quercus falcata 5. Carpinus caroliniana 6. Chasmanthium latifolium 7. Eupatorium rotundifolium 8. Liquidambar styraciflua 9. Liriodendron tulipifera 10. Phytolacca americana 11.  50% of total cover: 7.50  Woody Vine Stratum (Plot size: 30 ft r ) 1. 2. 3. 4.	20%  3 2 2 2 1 1 1 1 1 1 1 5 20%	of total cover:	FAC FACU FACU FAC FAC FAC FAC FAC FAC FACU FACU	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.

Sampling Point: DP-24

T 0: :		Absolute	Dominant	Indicator	5 ft 11
Tree Stratum		% Cover	Species?	Status	Definitions of Five Vegetation Strata:
7. 8.					<b>Tree</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
9.					(7.6 cm) or larger in diameter at breast height (DBH).
40					Continue Woody plants evaluding woody vince
					Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
					than 3 in. (7.6 cm) DBH.
12.			=Total Cover		Shrub - Woody Plants, excluding woody vines,
	50% of total cover:				approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum					Herb – All herbaceous (non-woody) plants, including
					herbaceous vines, regardless of size, <u>and</u> woody
					plants, except woody vines, less than approximately 3
0					ft (1 m) in height.
					<b>Woody Vine</b> – All woody vines, regardless of height.
			=Total Cover		
	50% of total cover:	20%	of total cover:		
Shrub Stratum	30 ft r				
7					
Q					
12					
			=Total Cover		
	50% of total cover:	20%	of total cover:		
Herb Stratum					
4.4					
15					
16					
17. 18					
18 19.					
24					
22.					
		15	=Total Cover		
	50% of total cover: 7.50		of total cover:	3.00	
Woody Vine Stratum	<u> </u>	<u> </u>	0. 1012 2		
6.					
7.					
8.					
9.					
10.					
			=Total Cover		
	50% of total cover:	20%	of total cover:		
Remarks: (If observed, I	list morphological adaptation	ns below.)			

Profile Desc	ription: (Describe t	to the dept	h needed to docu	ıment t	he indica	tor or c	onfirm the absence of indic	cators.)
Depth	Matrix		Redox	x Featu	es			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 2	2.5Y 4/2	50					Sandy Loam	
0 - 2	2.5Y 5/2	50					Sandy Loam	
2 - 7	2.5Y 5/3	100					Sandy Clay Loam	
7 - 18	2.5Y 6/3	100					Sandy Clay Loam	
18 - 24	2.5Y 5/6	100					Silty Clay Loam	
¹Type: C=Co	ncentration, D=Depl	etion, RM=l	Reduced Matrix, N	MS=Mas	ked San	d Grains.	<sup>2</sup> Location: PL=Por	re Lining, M=Matrix.
Hydric Soil I	ndicators: (Applica	ble to all L	RRs, unless othe	rwise r	oted.)		Indicators for Pro	blematic Hydric Soils <sup>3</sup> :
Histosol (	(A1)		Thin Dark Su	urface (S	9) <b>(LRR</b>	S, T, U)	1 cm Muck (As	9) <b>(LRR O)</b>
Histic Epi	ipedon (A2)		Barrier Island	ds 1 cm	Muck (S	12)	2 cm Muck (A	10) <b>(LRR S)</b>
Black His	stic (A3)		(MLRA 15	3B, 153	D)		——Coast Prairie F	Redox (A16)
Hydroger	n Sulfide (A4)		Loamy Muck	y Miner	al (F1) <b>(L</b>	RR O)	(outside ML	RA 150A)
Stratified	Layers (A5)		Loamy Gleye	ed Matri	x (F2)		Reduced Verti	c (F18)
Organic I	Bodies (A6) (LRR P,	T, U)	Depleted Ma	trix (F3)	)		(outside ML	.RA 150A, 150B)
5 cm Mud	cky Mineral (A7) (LR	R P, T, U)	Redox Dark	Surface	(F6)		Piedmont Floo	odplain Soils (F19) (LRR P, T)
Muck Pre	esence (A8) (LRR U)	)	Depleted Da	rk Surfa	ce (F7)		Anomalous Br	ight Floodplain Soils (F20)
1 cm Mud	ck (A9) (LRR P, T)		Redox Depre	essions	(F8)		(MLRA 153E	3)
Depleted	Below Dark Surface	e (A11)	Marl (F10) <b>(L</b>	.RR U)			Red Parent Ma	aterial (F21)
Thick Da	rk Surface (A12)		Depleted Oc	hric (F1	1) <b>(MLR</b>	A 151)	Very Shallow I	Dark Surface (F22)
Coast Pra	airie Redox (A16) (M	ILRA 150A)	Iron-Mangan	ese Ma	sses (F12	2) <b>(LRR</b>	O, P, T) (outside	MLRA 138, 152A in FL, 154)
Iron Mon	osulfide (A18)		Umbric Surfa	ace (F13	3) <b>(LRR F</b>	P, T, U)	Other (Explain	in Remarks)
Sandy M	ucky Mineral (S1) (L	RR O, S)	Delta Ochric	(F17) <b>(</b> I	MLRA 15	1)		
Sandy GI	eyed Matrix (S4)		Reduced Ve	rtic (F18	) (MLRA	150A, 1	50B) <sup>3</sup> Indicators of h	nydrophytic vegetation and
Sandy Re	edox (S5)		Piedmont Flo	oodplain	Soils (F	19) <b>(MLF</b>	RA 149A)	
Stripped	Matrix (S6)		Anomalous E	Bright Fl	oodplain	Soils (F2	20)	
Dark Sur	face (S7) <b>(LRR P, S</b>	, T, U)	(MLRA 14	9A, 153	C, 153D)	)		
Polyvalue	e Below Surface (S8)	)	Very Shallow	Dark S	Surface (F	22)	wetland hyd	Irology must be present,
(LRR S	S, T, U)		(MLRA 13	8, 152A	in FL, 1	54)	unless distu	rbed or problematic.
	.ayer (if observed):							
Type: _ Depth (in	ches):						Hydric Soil Present?	Yes No ✓
Remarks:							1.,,	
	oil indicators	not ob	corved					
nyunc s	oil indicators	ווטנ טט	served.					



Photograph 46: View of uplands at Data Point 24. This area was recently subject to clearcutting.



Photograph 47: View of non-hydric soil profile at Data Point 24.

## WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Franklin - Kistler Tract	City/County: Greensville County Sampling Date: 2025-05-01
Applicant/Owner: Otterdam Technology Group, LLC	State: Virginia Sampling Point: DP-25
Investigator(s): Nikolai Karlov, Jackson Livingstone, Jillian Burgan, WSSI Se	
Subregion (LRR or MLRA): P 133A	
Soil Map Unit Name: 40A - Woodington fine sandy loam, C	O to 2 percent slopes NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes No _ (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly distu	rrbed? Are "Normal Circumstances" present? Yes No
Are Vegetation , Soil , or Hydrology naturally problem	
	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes ✓ No	Is the Sampled Area
Hydric Soil Present? Yes V No	within a Wetland? Yes 🗸 No
Wetland Hydrology Present? Yes ✓ No	Willing a Welland: 165 175
Remarks:	
Data point sampled in an emergent wetland lo	·
perennial stream. The area appeared to have	been very recently clear-cut. Based on the
large-scale removal of existing vegetation, th	is is not considered a Normal Condition.
Conditions wetter than normal for this time of	vear.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)  Marl Deposits (B15) (LI	RR U) Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide Odor	(C1) Moss Trim Lines (B16)
Water Marks (B1) Oxidized Rhizospheres	on Living Roots (C3) Dry-Season Water Table (C2)
Sediment Deposits (B2)  Presence of Reduced I	ron (C4) Crayfish Burrows (C8)
Drift Deposits (B3) Recent Iron Reduction	in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)  Thin Muck Surface (C7	) Geomorphic Position (D2)
Iron Deposits (B5) Other (Explain in Rema	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)
Water-Stained Leaves (B9)	Sphagnum Moss (D8) (LRR T, U)
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)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	previous inspections), if available:
Remarks:	
ivenians.	
Wetland hydrology indicators observed.	
,	

<b>EGETATION (Five Strata)</b> – Use scier		•		Sampling Point: DP-25
Tree Stratum (Plot size: 30 ft r )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
l. 2.				Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
3. 1.				Total Number of Dominant Species Across All Strata: 3 (B)
5.				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100.00 (A/B)
		=Total Cover		Prevalence Index worksheet:
50% of total cover:	20%	of total cover		Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 30 ft r )				OBL species <u>0</u>
1				FACW species <u>6</u> x 2 = <u>12</u>
2				FAC species 15 x 3 = 45
3				FACU species $1 \times 4 = 4$
4. <u> </u>				UPL species 0 x 5 = 0
5				Column Totals: 22 (A) 61 (B)
5. <u> </u>				Prevalence Index = B/A = 2.77
	:	=Total Cover		Hydrophytic Vegetation Indicators:
50% of total cover:	20%	of total cover	:	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30 ft r )				✓ 2 - Dominance Test is >50%
1.				3 - Prevalence Index is ≤3.0 <sup>1</sup>
2.				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.				<u> </u>
+ 5.				1
6.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must b present, unless disturbed or problematic.
o		=Total Cover		Definitions of Five Vegetation Strata:
FOO/ of total covers				
50% of total cover:		of total cover	· ——	Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
Herb Stratum (Plot size: 30 ft r )  1. Arundinaria tecta	_	_	E A O \ A /	(7.6 cm) or larger in diameter at breast height (DBH).
<del></del>	5		FACW	
2. Acer rubrum	4		FAC	Sapling – Woody plants, excluding woody vines,
3. Athyrium asplenioides	3		FAC	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
4. Campsis radicans	2		FAC	, ,
5. Carpinus caroliniana	2		FAC	Shrub - Woody Plants, excluding woody vines,
Smilax rotundifolia	2		FAC	approximately 3 to 20 ft (1 to 6 m) in height.
7. Ilex opaca	<u>1</u>		FAC	Herb – All herbaceous (non-woody) plants, including
3. <u>Liriodendron tulipifera</u>	1		FACU	herbaceous vines, regardless of size, and woody
9. Quercus phellos	1		FACW	plants, except woody vines, less than approximately 3
10. Vitis rotundifolia	1		FAC	ft (1 m) in height.
11				<b>Woody Vine</b> – All woody vines, regardless of height.
	22	=Total Cover		
50% of total cover: 11.	00 20%	of total cover	4.40	
Woody Vine Stratum (Plot size: 30 ft r				
1.				
2.				
3.				
-				
5		Tatal O		Hydrophytic
		=Total Cover		Vegetation
50% of total cover:		of total cover		Present? Yes No

Troc Stratum		Absolute	Dominant	Indicator	Definitions of Five Vegetation Strate.
<u>Tree Stratum</u> 7.		% Cover	Species?	Status	Definitions of Five Vegetation Strata:
					<b>Tree</b> – 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).
					October Westerlands and the first second sections
4.4					Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
					than 3 in. (7.6 cm) DBH.
12.			=Total Cover		Shrub - Woody Plants, excluding woody vines,
	50% of total cover:		of total cover:		approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum	0070 01 total 00001.		or total cover.		
· -					<b>Herb</b> – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, <u>and</u> woody
_					plants, except woody vines, less than approximately 3
_					ft (1 m) in height.
40					Woody Vine – All woody vines, regardless of height.
			=Total Cover		
	50% of total cover:		of total cover:		
Shrub Stratum	30 ft r				
_					
0					
40					
12.					
			=Total Cover		
	50% of total cover:	20%	of total cover:		
Herb Stratum					
12.					
14.					
4 =					
16.					
17.					
18					
19					
20					
21.					
22.					
		22	=Total Cover		
	50% of total cover: 11.00	0 20%	of total cover:	4.40	
Woody Vine Stratum					
6.					
7.					
8.					
9.					
10					
			=Total Cover		
	50% of total cover:		of total cover:		
Remarks: (If observed, li	st morphological adaptation	ns below.)			

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)														
Depth Matrix Redox Features														
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Text	ure	Remarks					
0 - 2	10YR 3/2	100					Silt Loar	<u>m</u>						
2 - 6	10YR 6/2	96	10YR 6/4	4	С	М	Loamy S	Sand						
8 - 24	10YR 6/2	85	10YR 6/8	15	С		Sandy L	.oam						
-							<del></del>							
-														
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.												Х.		
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Indicators for Problematic Hydric Soils <sup>3</sup> :														
Histosol	(A1)		Thin Dark Su	ırface (S	9) <b>(LRR</b>	S, T, U)		1 cm Mu	ck (A9) (	LRR O)				
Histic Ep	ipedon (A2)		Barrier Island	ds 1 cm	Muck (S	12)	_	2 cm Mu	ck (A10)	(LRR S)				
Black His	stic (A3)		(MLRA 15	3B, 153	D)		_	Coast Pr	airie Red	lox (A16)				
Hydroger	n Sulfide (A4)		Loamy Muck	y Minera	al (F1) <b>(L</b>	.RR O)		(outsid	de MLRA	150A)				
Stratified	Layers (A5)		Loamy Gleye	ed Matrix	x (F2)			Reduced	l Vertic (F	<del>-</del> 18)				
Organic I	Bodies (A6) (LRR P,	T, U)	✓ Depleted Ma	trix (F3)				(outsic	de MLRA	150A, 1	50B)			
5 cm Mud	cky Mineral (A7) (LR	R P, T, U	Redox Dark	Surface	(F6)		_	Piedmon	t Floodpl	ain Soils	(F19)	(LRR P, T)		
Muck Pre	esence (A8) (LRR U)		Depleted Da	rk Surfa	ce (F7)		_	Anomalous Bright Floodplain Soils (F20)						
1 cm Mud	ck (A9) (LRR P, T)		Redox Depre	essions	(F8)			(MLRA 153B)						
Depleted	Below Dark Surface	(A11)	Marl (F10) <b>(L</b>	.RR U)			_	——Red Parent Material (F21)						
Thick Da	rk Surface (A12)		Depleted Oc	hric (F1	1) <b>(MLR</b>	A 151)	_	Very Sha	allow Dar	k Surface	(F22	2)		
Coast Pra	airie Redox (A16) ( <b>M</b>	LRA 150	Iron-Mangan	ese Mas	sses (F1	2) <b>(LRR</b>	O, P, T)	(ou	ıtside ML	_RA 138,	152	in FL, 154)		
Iron Mon	osulfide (A18)		Umbric Surfa	ce (F13	) (LRR F	P, T, U)	_	Other (Ex	xplain in	Remarks)	)			
-	ucky Mineral (S1) <b>(L</b> l	RR O, S)	Delta Ochric	(F17) <b>(N</b>	VILRA 15	51)								
-	eyed Matrix (S4)		Reduced Ver	rtic (F18	) (MLRA	150A, 1	I50B)	<sup>3</sup> Indicato	rs of hyd	rophytic v	egeta	ation and		
Sandy Re	edox (S5)		Piedmont Flo	odplain	Soils (F	19) <b>(MLF</b>	RA 149A)							
	Matrix (S6)		Anomalous E	-			20)							
	face (S7) <b>(LRR P, S,</b>	-	(MLRA 14											
	e Below Surface (S8)	)	Very Shallow						-	ogy must				
(LRR S			(MLRA 13	8, 152A	in FL, 1	54)		unless	disturbe	d or prob	lema	tic.		
	.ayer (if observed):													
Type:														
	ches):						Hydric	Soil Presen	ıt?	Yes_	<u></u>	No		
Remarks:														
Hydric s	oil indicators	S5 ar	nd F3 observ	ed.										



Photograph 48: View of wetlands at Data Point 25. This area was recently subject to clearcutting.



Photograph 49: View of hydric soil profile at Data Point 25.

## WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Franklin - Kistler Tract	City/County: Greensville County Sampling Date: 2025-05-01									
Applicant/Owner: Otterdam Technology Group, LLC	State: Virginia Sampling Point: DP-26									
Investigator(s): Nikolai Karlov, Jackson Livingstone, Jillian Burgan, WSSI Sec	ction, Township, Range:									
Landform (hillside, terrace, etc.): Hillslope Local	relief (concave, convex, none): None Slope (%): 5									
Subregion (LRR or MLRA): P 133A Lat: 36.79758284										
Soil Map Unit Name: 33A - Slagle fine sandy loam, 0 to 3 p										
Are climatic / hydrologic conditions on the site typical for this time of year?										
Are Vegetation , Soil , or Hydrology significantly distur										
Are Vegetation, Soil, or Hydrologynaturally 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 V  Hydric Soil Present?  Yes No V	Is the Sampled Area within a Wetland?  Yes  No ✓									
Wetland Hydrology Present? Yes No 🗸	Within a Wetanu:									
Remarks:	ad unaradient from a drainage feature and									
Data point sampled on a hillslope that is located										
	ave been very recently clear-cut. Based on the									
large-scale removal of existing vegetation, thi	s is not considered a Normal Condition.									
Conditions wetter than normal for this time of	year									
HYDROLOGY										
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)									
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)									
Surface Water (A1)  Aquatic Fauna (B13)  Mad Barasita (B45) (15)	Sparsely Vegetated Concave Surface (B8)									
High Water Table (A2)  Marl Deposits (B15) (LR										
Saturation (A3) Hydrogen Sulfide Odor										
Water Marks (B1) — Oxidized Rhizospheres  Sodiment Deposits (R2) — Processe of Reduced In										
Sediment Deposits (B2)										
Drift Deposits (B3) Recent Iron Reduction in Algal Mat or Crust (B4) Thin Muck Surface (C7)										
Iron Deposits (B5)  Other (Explain in Remai	<del></del> · · · · · · · · · · · · · · · · · ·									
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)									
Water-Stained Leaves (B9)	Sphagnum Moss (D8) (LRR T, U)									
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)										
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	revious inspections), if available:									
Remarks:										
	n the ground curface. Sails appeared lightly									
No water table observed within 24 inches from										
saturated at 20 inches below the ground surfa	ice.									

<b>EGETATION (Five Strata)</b> – Use scier		•		Sampling Point: DP-26
Tree Stratum (Plot size: 30 ft r )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
l. 2.				Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
i.				Total Number of Dominant Species Across All Strata: 3 (B)
				· ` ` `
5				Percent of Dominant Species
S				That Are OBL, FACW, or FAC: 33.33 (A/B)
	=	=Total Cover		Prevalence Index worksheet:
50% of total cover:	20%	of total cover:	:	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 30 ft r )				OBL species 0 x 1 = 0
L				FACW species 1
2.				FAC species $7   x 3 = 21$
				FACU species $8   x4 = 32$
1.				UPL species $0$ $x = 0$
	<del></del>			
5.				(F)
5				Prevalence Index = B/A = 3.43
	=	=Total Cover		Hydrophytic Vegetation Indicators:
50% of total cover:	20%	of total cover:	:	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30 ft r )				2 - Dominance Test is >50%
<u></u> 1.				3 - Prevalence Index is ≤3.0 <sup>1</sup>
2.				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.				
4				
5				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be
5				present, unless disturbed or problematic.
	=	=Total Cover		Definitions of Five Vegetation Strata:
50% of total cover:	20%	of total cover:	·	Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 30 ft r )				approximately 20 ft (6 m) or more in height and 3 in.
1. Acer rubrum	3	~	FAC	(7.6 cm) or larger in diameter at breast height (DBH).
Lonicera japonica	3		FACU	Sapling – Woody plants, excluding woody vines,
3. Oxydendrum arboreum	3		FACU	approximately 20 ft (6 m) or more in height and less
4. Quercus falcata	2		FACU	than 3 in. (7.6 cm) DBH.
	- =			
5. Vitis rotundifolia	2		FAC	Shrub - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
5. Liquidambar styraciflua	<u> 1                                   </u>		FAC	
7. Quercus phellos	1		FACW	Herb – All herbaceous (non-woody) plants, including
3. Smilax rotundifolia	1		FAC	herbaceous vines, regardless of size, and woody
9				plants, except woody vines, less than approximately 3
10.				ft (1 m) in height.
11.				<b>Woody Vine</b> – All woody vines, regardless of height.
· · · -	16 :	=Total Cover		
500/ at total agreem 9 (			. 3 20	
50% of total cover: 8.0	20%	of total cover:	3.20	
Noody Vine Stratum (Plot size: 30 ft r )				
l				
2				
3				
4.				
5.				
				Hydrophytic
		=Total Cover		
50% of total cover:		=Total Cover of total cover:		Vegetation Present? Yes No

Tree Stratum		Absolute	Dominant Species?	Indicator	Definitions of Five Vegetation Strate.
7.		% Cover	· ——	Status	Definitions of Five Vegetation Strata:
					<b>Tree</b> – 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).
					Oction Westerlands and discounted and
4.4					Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
					than 3 in. (7.6 cm) DBH.
12.			=Total Cover		Shrub - Woody Plants, excluding woody vines,
	50% of total cover:		6 of total cover:		approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum			o or total dover.		
· -					<b>Herb</b> – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, <u>and</u> woody
_					plants, except woody vines, less than approximately 3
_					ft (1 m) in height.
40					Woody Vine – All woody vines, regardless of height.
	_		=Total Cover		
	50% of total cover:	20%	6 of total cover:		
Shrub Stratum	30 ft r				
· ·					
_					
0					
4.0					
12.					
			=Total Cover		
	50% of total cover:	20%	6 of total cover:		
Herb Stratum					
12					
14					
4 =					
16					
17					
18					
19					
20.					
21					
22.					
		16	=Total Cover		
	50% of total cover: 8.00	20%	6 of total cover:	3.20	
Woody Vine Stratum					
6.					
7					
8.					
9					
10					
			=Total Cover		
	50% of total cover:		6 of total cover:		
Remarks: (If observed, li	ist morphological adaptatior	ns below.)			

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)												
Depth Matrix Redox Features												
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Text	ure	Remarks		rks	
0 - 4	2.5Y 3/3	100					Sandy L	oam				
4 - 16	2.5Y 5/4	98	10YR 6/8	2	С		Loamy S	Sand				
16 - 24	10YR 5/6	93	7.5YR 5/8	7	С		Sandy C	lay				
-												
<u> </u>												_
_												
¹Type: C=Co	oncentration, D=Depl	etion, RM	/=Reduced Matrix, N	/S=Mas	ked San	d Grains	. <sup>2</sup> L		=Pore Lini	ng, M=M	atrix.	
Hydric Soil I	ndicators: (Applica	ble to all	LRRs, unless other	rwise n	oted.)		In	ndicators fo	r Problem	atic Hyd	ric Soils	<sup>3</sup> :
Histosol	(A1)		Thin Dark Su	ırface (S	9) <b>(LRR</b>	S, T, U)	_	1 cm Muc	ck (A9) <b>(LR</b>	RO)		
Histic Ep	ipedon (A2)		Barrier Island	ds 1 cm	Muck (S	12)	_	2 cm Muc	ck (A10) <b>(L</b>	RR S)		
Black His	stic (A3)		(MLRA 15	3B, 153	D)		_	Coast Pra	airie Redox	(A16)		
Hydrogei	n Sulfide (A4)		Loamy Muck	y Miner	al (F1) <b>(L</b>	.RR O)		(outsid	e MLRA 1	50A)		
Stratified	Layers (A5)		Loamy Gleye	ed Matrix	x (F2)			Reduced	Vertic (F18	8)		
Organic I	Bodies (A6) (LRR P,	T, U)	Depleted Ma	trix (F3)				(outsid	e MLRA 1	50A, 150	B)	
5 cm Mu	cky Mineral (A7) (LR	R P, T, U	Redox Dark	Surface	(F6)			Piedmont	t Floodplair	n Soils (F	19) <b>(LRR</b>	P, T)
Muck Pre	esence (A8) (LRR U)		Depleted Da	rk Surfa	ce (F7)		_	Anomalou	us Bright F	loodplain	Soils (F2	20)
1 cm Mu	ck (A9) (LRR P, T)		Redox Depre	essions	(F8)			(MLRA 153B)				
Depleted	Below Dark Surface	(A11)	Marl (F10) <b>(L</b>	.RR U)			_	——Red Parent Material (F21)				
Thick Da	rk Surface (A12)		Depleted Oc	hric (F1	1) <b>(ML</b> R	A 151)		Very Sha	llow Dark S	Surface (F	<del>-</del> 22)	
Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR 0						O, P, T)	(out	tside MLR	A 138, 1	52A in Fl	., 154)	
Iron Mon	osulfide (A18)		Umbric Surfa	ace (F13	) (LRR F	P, T, U)		Other (Ex	plain in Re	emarks)		
Sandy M	ucky Mineral (S1) (L	RR O, S)	Delta Ochric	(F17) <b>(N</b>	ILRA 15	51)						
Sandy G	leyed Matrix (S4)		Reduced Ve	rtic (F18	) (MLRA	150A, 1	50B)	<sup>3</sup> Indicator	s of hydror	ohytic veg	getation a	ınd
Sandy R	edox (S5)		Piedmont Flo	odplain	Soils (F	19) <b>(MLF</b>	RA 149A)					
Stripped	Matrix (S6)		Anomalous E	Bright Fl	oodplain	Soils (F	20)					
Dark Sur	face (S7) <b>(LRR P, S</b> ,	T, U)	(MLRA 14	9A, 153	C, 153D)	)						
Polyvalue	e Below Surface (S8)	)	Very Shallow	/ Dark S	urface (F	<sup>-</sup> 22)		wetland	d hydrolog	y must be	present	,
(LRR S	S, T, U)		(MLRA 13	8, 152A	in FL, 1	54)		unless	disturbed	or probler	matic.	
	.ayer (if observed):											
Type:												
Depth (in Remarks:	iches):						Hydric S	Soil Present	t? Y	'es	No_	<u></u>
Hydric s	oil indicators	not o	bserved.									



Photograph 50: View of uplands at Data Point 26. This area was recently subject to clearcutting.



Photograph 51: View of non-hydric soil profile at Data Point 26.

# WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Franklin - Kistler Tract	City/County: Greens	ville County Sampling Date: 2025-05-01
Applicant/Owner: Otterdam Technology Group		State: Virginia Sampling Point: DP-27
Investigator(s): Nikolai Karlov, Jackson Livingstone, Jillian Burga		
Landform (hillside, terrace, etc.): Drainage Pattern		
Subregion (LRR or MLRA): P 133A Lat: 36.7	<u> </u>	-77.52384242 Datum: NAD 83
Soil Map Unit Name: 10B3 - Craven clay loam, 2 to 6		
Are climatic / hydrologic conditions on the site typical for this ti	me of year? Yes	No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology signif	icantly disturbed? Are "Normal (	Circumstances" present? Yes No _ 🗸
Are Vegetation , Soil , or Hydrology natur		cplain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map she		
Hydrophytic Vegetation Present? Yes V No	Is the Sampled Area	-
	within a Wetland?	Yes ✔ No
Wetland Hydrology Present? Yes ✓ No		
Remarks: Data point sampled in an emergent we	tland located along a (	Vrainage feature. The area
	_	_
appeared to have been very recently of		
vegetation, this is not considered a No	rmai Condition. Condi	lions wetter than normal for this
time of year.		
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all tha		Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fau	` '	Sparsely Vegetated Concave Surface (B8)
<del></del>	its (B15) <b>(LRR U)</b>	Drainage Patterns (B10)
<del></del> -	Sulfide Odor (C1)	Moss Trim Lines (B16)
Water Marks (B1) Oxidized RI	hizospheres on Living Roots (C3)	✓ Dry-Season Water Table (C2)
Sediment Deposits (B2)Presence o	f Reduced Iron (C4)	Crayfish Burrows (C8)
Drift Deposits (B3) Recent Iron	Reduction in Tilled Soils (C6)	Saturation Visible on Aerial Imagery (C9)
✓ Algal Mat or Crust (B4) Thin Muck	Surface (C7)	✓ Geomorphic Position (D2)
Iron Deposits (B5) Other (Expl	ain in Remarks)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)		FAC-Neutral Test (D5)
Water-Stained Leaves (B9)		Sphagnum Moss (D8) (LRR T, U)
Field Observations:		
	pth (inches): 0.5	
	pth (inches): 6	,
Saturation Present? Yes No De	pth (inches): 4 Wetland	Hydrology Present? Yes <u>✓</u> No
(includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aer	ial photos, previous inspections), if a	ıvailable:
Remarks:		
Sama areas alosar to the drainage feat	tura avhibitad curfaca	water ranging from 0-0.5 inches
Some areas closer to the drainage feat		water ranging from 0-0.5 inches
in depth. Wetland hydrology indicators	s observed.	

**VEGETATION (Five Strata)** – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r )  1.	20%	=Total Cover of total cover  of total cover of total cover of total cover		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: 100.00 (A/B)  Prevalence Index worksheet:  Total % Cover of: Multiply by:  OBL species 0 x 1 = 0  FACW species 3 x 2 = 6  FAC species 11 x 3 = 33  FACU species 5 x 4 = 20  UPL species 0 x 5 = 0  Column Totals: 19 (A) 59 (B)  Prevalence Index = B/A = 3.10  Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation  ✓ 2 - Dominance Test is >50%  3 - Prevalence Index is ≤3.0¹
2	20%	of total cover		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: $100.00$ (A/B)  Prevalence Index worksheet:  Total % Cover of: Multiply by:  OBL species $0$ $x 1 = 0$ FACW species $3$ $x 2 = 6$ FAC species $11$ $x 3 = 33$ FACU species $5$ $x 4 = 20$ UPL species $0$ $x 5 = 0$ Column Totals: $19$ (A) $59$ (B)  Prevalence Index $= B/A = 3.10$ Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation  V 2 - Dominance Test is $> 50\%$ $3$ - Prevalence Index is $\le 3.0^1$
5. 50% of total cover:	20%	of total cover		Species Across All Strata: 3 (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)  Prevalence Index worksheet:  Total % Cover of: Multiply by:  OBL species 0 x 1 = 0  FACW species 3 x 2 = 6  FAC species 11 x 3 = 33  FACU species 5 x 4 = 20  UPL species 0 x 5 = 0  Column Totals: 19 (A) 59 (B)  Prevalence Index = B/A = $3.10$ Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation  v 2 - Dominance Test is >50%  3 - Prevalence Index is $\leq 3.0^1$
50% of total cover:  Sapling Stratum (Plot size: 30 ft r )  1	20%	of total cover		Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)  Prevalence Index worksheet:  Total % Cover of: Multiply by:  OBL species $0 \times 1 = 0$ FACW species $3 \times 2 = 6$ FAC species $11 \times 3 = 33$ FACU species $5 \times 4 = 20$ UPL species $0 \times 5 = 0$ Column Totals: $19 \times 5 = 0$ Column Totals: $19 \times 5 = 0$ Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation  V 2 - Dominance Test is >50%  3 - Prevalence Index is $\leq 3.0^1$
50% of total cover:  Sapling Stratum (Plot size: 30 ft r )  1	20%	of total cover		That Are OBL, FACW, or FAC: 100.00 (A/B)  Prevalence Index worksheet:  Total % Cover of: Multiply by:  OBL species 0 x 1 = 0  FACW species 3 x 2 = 6  FAC species 11 x 3 = 33  FACU species 5 x 4 = 20  UPL species 0 x 5 = 0  Column Totals: 19 (A) 59 (B)  Prevalence Index = B/A = 3.10  Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation  v 2 - Dominance Test is >50%  3 - Prevalence Index is $\leq 3.0^{1}$
Sapling Stratum (Plot size: 30 ft r )  1	20%	of total cover		Total % Cover of: Multiply by:  OBL species $0$
Sapling Stratum (Plot size: 30 ft r )  1		=Total Cover		OBL species $0$ $x 1 = 0$ FACW species $3$ $x 2 = 6$ FAC species $11$ $x 3 = 33$ FACU species $5$ $x 4 = 20$ UPL species $0$ $x 5 = 0$ Column Totals: $19$ (A) $59$ (B)  Prevalence Index = B/A = $3.10$ Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation  2 - Dominance Test is >50%  3 - Prevalence Index is $\leq 3.0^{1}$
1				FACW species $3$ $\times 2 = 6$ FAC species $11$ $\times 3 = 33$ FACU species $5$ $\times 4 = 20$ UPL species $0$ $\times 5 = 0$ Column Totals: $19$ (A) $59$ (B)  Prevalence Index = B/A = $3.10$ Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation  2 - Dominance Test is >50%  3 - Prevalence Index is $\leq 3.0^1$
2				FAC species $11$ $x 3 = 33$ FACU species $5$ $x 4 = 20$ UPL species $0$ $x 5 = 0$ Column Totals: $19$ (A) $59$ (B)  Prevalence Index = B/A = $3.10$ Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation  v 2 - Dominance Test is >50% $3$ - Prevalence Index is $\leq 3.0^1$
3. 4. 5. 5. 5. 50% of total cover:				FAC species $11$ $x 3 = 33$ FACU species $5$ $x 4 = 20$ UPL species $0$ $x 5 = 0$ Column Totals: $19$ (A) $59$ (B)  Prevalence Index = B/A = $3.10$ Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation  v 2 - Dominance Test is >50% $3$ - Prevalence Index is $\leq 3.0^1$
5				FACU species $5$ $x 4 = 20$ UPL species $0$ $x 5 = 0$ Column Totals: $19$ $(A)$ $59$ $(B)$ Prevalence Index = B/A = $3.10$ Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation  2 - Dominance Test is >50%  3 - Prevalence Index is $\le 3.0^1$
5				UPL species $0$ $x = 5$ $0$ $0$ $0$ $0$ $0$ $0$ $0$ $0$ $0$ $0$
50% of total cover:				Column Totals: 19 (A) 59 (B)  Prevalence Index = B/A = 3.10  Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation  2 - Dominance Test is >50%  3 - Prevalence Index is ≤3.01
50% of total cover: Shrub Stratum (Plot size: 30 ft r)  1				Prevalence Index = B/A = 3.10  Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation  2 - Dominance Test is >50%  3 - Prevalence Index is ≤3.0¹
50% of total cover: Shrub Stratum (Plot size: 30 ft r)  1				Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation  2 - Dominance Test is >50%  3 - Prevalence Index is ≤3.0¹
Shrub Stratum (Plot size: 30 ft r )  1				1 - Rapid Test for Hydrophytic Vegetation  2 - Dominance Test is >50%  3 - Prevalence Index is ≤3.0¹
Shrub Stratum (Plot size: 30 ft r )  1	20%	of total cover		2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹
1				3 - Prevalence Index is ≤3.0 <sup>1</sup>
1				·   <del></del>
2.				·   <del></del>
				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.				Problematic Hydrophytic vegetation (Explain)
J				.
4				
5				<sup>1</sup> Indicators of hydric soil and wetland hydrology must b
6.				present, unless disturbed or problematic.
		=Total Cover		Definitions of Five Vegetation Strata:
50% of total cover:	20%	of total cover		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 30 ft r )		0. 1010. 0010.	· ——	approximately 20 ft (6 m) or more in height and 3 in.
	_		EAC	(7.6 cm) or larger in diameter at breast height (DBH).
	5		FAC	
2. Arundinaria tecta	3		FACW	Sapling – Woody plants, excluding woody vines,
3. Vitis rotundifolia	3		FAC	approximately 20 ft (6 m) or more in height and less
4. Athyrium asplenioides	2		FAC	than 3 in. (7.6 cm) DBH.
5. Oxydendrum arboreum	2		FACU	Shrub - Woody Plants, excluding woody vines,
6. Polystichum acrostichoides	2		FACU	approximately 3 to 20 ft (1 to 6 m) in height.
7. Liquidambar styraciflua	1		FAC	Horte All horte coord (non-viscoli ) plante including
3. Liriodendron tulipifera	1		FACU	Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, <u>and</u> woody
<u> </u>	<u> </u>		-7100	plants, except woody vines, less than approximately 3
9.				ft (1 m) in height.
10				
11				Woody Vine – All woody vines, regardless of height.
	19 =	=Total Cover		
50% of total cover: 9.50	20%	of total cover	3.80	
Woody Vine Stratum (Plot size: 30 ft r )				
1.				
2.				· <b> </b>
3				
4				. ]
5				Hydrophytic
		=Total Cover	<u> </u>	Vegetation
50% of total cover:	20%	of total cover		Present? Yes No
Remarks: (If observed, list morphological adaptation				

# **VEGETATION Continued (Five Strata)** – Use scientific names of plants. Sampling Point: DP-27

T 0: :		Absolute	Dominant	Indicator	D (1 1/2 ) (   1 1/2 ) (   1 1/2 )
Tree Stratum		% Cover	Species?	Status	Definitions of Five Vegetation Strata:
7. 8.	·			·	<b>Tree</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
9.					(7.6 cm) or larger in diameter at breast height (DBH).
40					Sapling – Woody plants, excluding woody vines,
					approximately 20 ft (6 m) or more in height and less
					than 3 in. (7.6 cm) DBH.
·-			=Total Cover		Shrub - Woody Plants, excluding woody vines,
	50% of total cover:				approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum	<del>-</del>				<b>Herb</b> – All herbaceous (non-woody) plants, including
7					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.
12			T-151 Caver		
	FOO/ of total cover:		=Total Cover		
Shrub Stratum	50% of total cover:	20 /0	of total cover:		
Ω					
_			· ·		
12.					
			=Total Cover		
	50% of total cover:	20%	of total cover:		
Herb Stratum					
	_				
4.4					
15					
16 17.					
18.					
19.					
21.					
22.					
		19	=Total Cover		
	50% of total cover: <b>9.50</b>	20%	of total cover:	3.80	
Woody Vine Stratum					
6.					
7					
8					
9.					
10					
	500/ // /		=Total Cover		
	50% of total cover:		of total cover:		
Remarks: (If observed, li	ist morphological adaptation	ns below.)			

Profile Desc	ription: (Describe t	o the de	pth needed to doc	ument th	ne indica	ator or c	onfirm the absence	of indicators.)
Depth	Matrix		-	x Featur				,
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 2	10YR 3/1	100					Silt Loam	
2 - 12	10YR 5/1	95	10YR 6/8	5	С		Sandy Clay Loam	
12 - 14	10YR 5/1	95	10YR 6/8	5	С		Sandy Loam	
14 - 24	10YR 6/1	95	10YR 6/4	5	С	М	Loamy Sand	
-								
-								
-								
¹Type: C=Co	ncentration, D=Depl	etion, RN	M=Reduced Matrix, N	л ИS=Mas	ked San	d Grains	Location:	PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Applica	ble to al	I LRRs, unless other	erwise n	oted.)		Indicators	for Problematic Hydric Soils <sup>3</sup> :
Histosol (	(A1)		Thin Dark S	urface (S	9) <b>(LRR</b>	S, T, U)	1 cm M	uck (A9) (LRR O)
Histic Epi	ipedon (A2)		Barrier Islan	ds 1 cm	Muck (S	12)	2 cm M	uck (A10) (LRR S)
Black His			(MLRA 15		,	,		Prairie Redox (A16)
	` '		•	•	•	RR O)		,
Hydrogen Sulfide (A4)Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A)  Stratified Layers (A5) Loamy Gleved Matrix (F2) Reduced Vertic (F18)								
Stratified Layers (A5)Loamy Gleyed Matrix (F2)Reduced Vertic (F18)Organic Bodies (A6) (LRR P, T, U)								
				, ,			•	· · ·
5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T)								, , , , , , , , , , , , , , , , , , , ,
Muck Presence (A8) (LRR U)Depleted Dark Surface (F7)Anomalous Bright Floodplain Soils (F20)								• • • • • • • • • • • • • • • • • • • •
1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B)								
Depleted Below Dark Surface (A11) Marl (F10) (LRR U) Red Parent Material (F21)								
Thick Dark Surface (A12)Depleted Ochric (F11) (MLRA 151)Very Shallow Dark Surface (F22)								
Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154)								
Iron Monosulfide (A18) Umbric Surface (F13) (LRR P, T, U) Other (Explain in Remarks)							Explain in Remarks)	
Sandy M	ucky Mineral (S1) <b>(L</b> l	RR O, S)	Delta Ochric	(F17) <b>(N</b>	VILRA 15	51)		
Sandy GI	eyed Matrix (S4)		Reduced Ve	rtic (F18	) (MLRA	150A, 1	50B) <sup>3</sup> Indicat	ors of hydrophytic vegetation and
Sandy Re	edox (S5)		Piedmont Fl	oodplain	Soils (F	19) <b>(MLF</b>	RA 149A)	
Stripped	Matrix (S6)		Anomalous I	Bright Fl	oodplain	Soils (F2	20)	
Dark Sur	face (S7) (LRR P, S,	T, U)	(MLRA 14	9A, 153	C, 153D)	)		
Polyvalue	e Below Surface (S8)	)	Very Shallov	v Dark S	urface (F	<sup>-</sup> 22)	wetla	and hydrology must be present,
(LRR S			(MLRA 13	8, 152A	in FL, 1	54)		ss disturbed or problematic.
	ayer (if observed):							
Type:								_
Depth (in	ches):						Hydric Soil Prese	ent? Yes V No No
Remarks:								
Hydric s	oil indicator F	-3 ob:	served.					
,		0 0.0						



Photograph 52: View of wetlands at Data Point 27. This area was recently subject to clearcutting.



Photograph 53: View of hydric soil profile at Data Point 27.

# WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Franklin - Kistler Ti	ract	City/County: Greens	sville County Sa	mpling Date: 2025-05-0		
Applicant/Owner: Otterdam Technology		<u> </u>	_	mpling Point: DP-28		
Investigator(s): Nikolai Karlov, Jackson Livingsto	· ·	ction, Township, Range				
Landform (hillside, terrace, etc.): Flat		relief (concave, convex		Slope (%): 1		
	Lat: 36.7970874		-			
,			-77.52574816			
Soil Map Unit Name: 33A - Slagle fine s		<u> </u>				
Are climatic / hydrologic conditions on the site t				ain in Remarks.)		
Are Vegetation, Soil, or Hydrolog	gy significantly distur	rbed? Are "Normal	Circumstances" present?	Yes No		
Are Vegetation, Soil, or Hydrolog	gynaturally problem	atic? (If needed, ex	xplain any answers in Remai	rks.)		
SUMMARY OF FINDINGS – Attach s	site map showing sar	mpling point locat	ions, transects, impo	rtant features, etc.		
Hydrophytic Vegetation Present? Y	∕es ✓ No	Is the Sampled Area				
' ' ' °	/es No No	within a Wetland?	Yes ✔ No	0		
<i>*</i>	′es ✓ No		·	<u> </u>		
Remarks: Data point sampled in a flat e	mergent wetland	located at the	top of two drains	age features		
	=		-	_		
The area appeared to have be	-		_			
existing vegetation, this is no	ot considered a N	ormal Conditio	n. Conditions wet	ter than normal		
for this time of year.						
HYDROLOGY						
Wetland Hydrology Indicators:			Secondary Indicators (min	<u> </u>		
Primary Indicators (minimum of one is required			Surface Soil Cracks (E			
Surface Water (A1)	Aquatic Fauna (B13)		Sparsely Vegetated C			
High Water Table (A2)	Marl Deposits (B15) (LF	RR U)	Drainage Patterns (B1	10)		
✓ Saturation (A3) Hydrogen Sulfide Odor (C1) Moss Trim Lines (B16)						
Water Marks (B1)	Oxidized Rhizospheres	= : :	Dry-Season Water Ta			
Sediment Deposits (B2)	Presence of Reduced Ir	ron (C4)	Crayfish Burrows (C8)			
Drift Deposits (B3)	Recent Iron Reduction i	in Tilled Soils (C6)	Saturation Visible on A	Aerial Imagery (C9)		
Algal Mat or Crust (B4)	Thin Muck Surface (C7)	)	✓ Geomorphic Position (	(D2)		
Iron Deposits (B5)	Other (Explain in Rema	ırks)	✓ Shallow Aquitard (D3)	)		
Inundation Visible on Aerial Imagery (B7)	_		FAC-Neutral Test (D5	n)		
Water-Stained Leaves (B9)			Sphagnum Moss (D8)	(LRR T, U)		
Field Observations:						
Surface Water Present? Yes I Water Table Present? Yes I	No Depth (inches):					
Water Table Present? Yes	No Depth (inches):	: <u></u>				
Saturation Present? Yes !	No Depth (inches):	: 6 Wetland	Hydrology Present?	Yes V No		
(includes capillary fringe)						
Describe Recorded Data (stream gauge, moni	itoring well, aerial photos, p	revious inspections), if a	available:			
Remarks:						
	6 inches A hard	alay layer eyte	ends below that life	koly perchina		
Saturation extends from 0 to			HUS Delow that, in	Kely perching		
water. Wetland hydrology ind	licators observed	<b>1.</b>				

	Absolute	Dominant	Indicator	Sampling Point: DP-28
Tree Stratum (Plot size: 30 ft r )	% Cover	Species?	Status	Dominance Test worksheet:
1.	70 0010.	ороскос.	Otatao	
				Number of Dominant Species That Are OBL FACW or FAC: 4 (A)
2.				That Are OBL, FACW, or FAC: 4 (A)
3.				Total Number of Dominant
4				Species Across All Strata: 4 (B)
5				Percent of Dominant Species
3				That Are OBL, FACW, or FAC: 100.00 (A/B)
	:	=Total Cover		Prevalence Index worksheet:
50% of total cover:	20%	of total cover:	:	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 30 ft r )				OBL species 0 $x = 0$
				FACW species 4 x 2 = 8
2.				FAC species $9$ $x 3 = 27$
3.				FACU species $\frac{3}{1}$ $x = \frac{27}{4}$
4. -				
5.				Column Totals: 14 (A) 39 (B)
6				Prevalence Index = B/A = 2.78
	=	=Total Cover		Hydrophytic Vegetation Indicators:
50% of total cover:	20%	of total cover:	:	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30 ft r )				✓ 2 - Dominance Test is >50%
1.				✓ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
2				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2				1 Tobiemano Hydrophyno vogotanom (Explain)
3.				
4				
5				<sup>1</sup> Indicators of hydric soil and wetland hydrology must b
6.				present, unless disturbed or problematic.
	=	=Total Cover		Definitions of Five Vegetation Strata:
50% of total cover:	20%	of total cover:	:	Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 30 ft r )				approximately 20 ft (6 m) or more in height and 3 in.
1. Arundinaria tecta	2	<b>/</b>	FACW	(7.6 cm) or larger in diameter at breast height (DBH).
2. Ilex opaca	2		FAC	Carding Woody plants evaluding woody vines
Liquidambar styraciflua			FAC	Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
	_ 2			than 3 in. (7.6 cm) DBH.
4. Vaccinium formosum	_ 2		FAC	
5. Morella cerifera	_ 1		FAC	Shrub - Woody Plants, excluding woody vines,
6. Quercus falcata	1		FACU	approximately 3 to 20 ft (1 to 6 m) in height.
7. Quercus michauxii	1		FACW	Herb – All herbaceous (non-woody) plants, including
8. Quercus phellos	1		FACW	herbaceous vines, regardless of size, and woody
9. Smilax rotundifolia	1		FAC	plants, except woody vines, less than approximately 3
10. Vitis rotundifolia	1		FAC	ft (1 m) in height.
11.	<u> </u>			Woody Vine – All woody vines, regardless of height.
	14	=Total Cover		, , , ,
50% of total access 7.6			2 00	
50% of total cover: 7.0	20%	of total cover:	2.80	
Woody Vine Stratum (Plot size: 30 ft r )				
1				
2				
3.				
4.				
5.				
5.		Tatal Cover		Hydrophytic
		=Total Cover of total cover:		Vegetation Present? Yes ✓ No
50% of total cover:				Present? Yes No

# **VEGETATION Continued (Five Strata)** – Use scientific names of plants. Sampling Point: DP-28

Tree Stratum		Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Five Vegetation Strata:
7					Tree – Woody plants, excluding woody vines,
0					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,
11					approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
_	_		=Total Cover		Shrub - Woody Plants, excluding woody vines,
	50% of total cover:	20%	% of total cover:		approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum					Herb – All herbaceous (non-woody) plants, including
					herbaceous vines, regardless of size, <u>and</u> woody plants, except woody vines, less than approximately 3
•					ft (1 m) in height.
					Woody Vine – All woody vines, regardless of height.
			=Total Cover		
	50% of total cover:	20%	% of total cover:		
Shrub Stratum	30 ft r				
_					
11.					
12.					
			=Total Cover		
	50% of total cover:	20%	% of total cover:		
Herb Stratum					
12.					
16.	_	-	-		
17.					
18					
19					
21 22.		-	<del></del>		
		14	=Total Cover		
	50% of total cover: 7.00	20%	- % of total cover:	2.80	
Woody Vine Stratum		<u></u>			
6.					
	_				
8.					
9. 10.			<del></del>		
10.	_		=Total Cover		
	50% of total cover:	20%	of total cover:		
Remarks: (If observed,	list morphological adaptation	ns below.)			•

Profile Desc	ription: (Describe t	o the de				ator or c	onfirm the a	absence of indi	cators.)		
Depth	Matrix			x Featur		. 2					
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Textu		Remarks	3	
0 - 4	10YR 2/2	100					Silt Loam	<u> </u>			
4 - 10	2.5Y 5/1	98	10YR 4/6	2	<u>C</u>	<u>M</u>	Silty Clay	Loam			
10 - 24	2.5Y 5/4	85	5YR 4/6	<u>15</u>	<u>C</u>		Clay Loa	m			
-											
-											
<sup>1</sup> Type: C=Co	ncentration, D=Depl	etion, RM	1=Reduced Matrix, N	/IS=Mas	ked San	d Grains.	. <sup>2</sup> Lo	ocation: PL=Po	re Lining, M=Matr	ix.	
Hydric Soil I	ndicators: (Applica	ble to all	LRRs, unless other	rwise n	oted.)		Inc	dicators for Pro	oblematic Hydric	Soils <sup>3</sup> :	
Histosol	(A1)		Thin Dark Su	urface (S	9) <b>(LRR</b>	S, T, U)		1 cm Muck (A			
-	ipedon (A2)		Barrier Island			12)		_2 cm Muck (A			
Black His	` '		(MLRA 15	•	•		_	Coast Prairie I	, ,		
Hydrogen Sulfide (A4)Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A)											
Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18)											
_	Bodies (A6) (LRR P,	-	Depleted Ma					-	-RA 150A, 150B)		
	cky Mineral (A7) (LR esence (A8) (LRR U)		Redox Dark  Depleted Da		` '		_		odplain Soils (F19 right Floodplain S		
	ck (A9) <b>(LRR P, T)</b>		Redox Depre		` ,					Jiis (1 20)	
	Below Dark Surface	(A11)	Marl (F10) <b>(L</b>		(10)		(MLRA 153B) ——Red Parent Material (F21)				
•	rk Surface (A12)	(, )	Depleted Oc	-	1) <b>(MLR</b> /	A 151)	` '				
	airie Redox (A16) ( <b>M</b>	LRA 150				-					
	osulfide (A18)		Umbric Surfa		•	, .	•				
Sandy M	ucky Mineral (S1) <b>(L</b> I	RR O, S)				-		_ ` `	,		
Sandy G	eyed Matrix (S4)		Reduced Ve	rtic (F18	) (MLRA	150A, 1	50B)	<sup>3</sup> Indicators of I	hydrophytic veget	ation and	
Sandy Re	edox (S5)		Piedmont Flo	oodplain	Soils (F	19) <b>(MLF</b>	RA 149A)				
Stripped	Matrix (S6)		Anomalous E	Bright Fl	oodplain	Soils (F2	20)				
—— Dark Sur	face (S7) <b>(LRR P, S,</b>	T, U)	(MLRA 14	9A, 153	C, 153D	)					
	Below Surface (S8)	)	Very Shallow	Dark S	urface (F	<sup>=</sup> 22)		wetland hyd	drology must be p	resent,	
(LRR S			(MLRA 13	8, 152A	in FL, 1	54)	1	unless distu	urbed or problema	itic.	
	ayer (if observed):										
Type: _ Depth (in	choc):						Hudric S	Soil Present?	Yes ✔	No	
Remarks:							Tiyunc 3	on resent:	163		
	oil indicator [	-2 ab	acruad								
Hydric S	oil indicator F	-3 00:	servea.								



Photograph 54: View of wetlands at Data Point 28. This area was recently subject to clearcutting.



Photograph 55: View of hydric soil profile at Data Point 28.

# WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Franklin - Kistler Tract City/County: Greensville County Sampling Date: 2025-05-06
Applicant/Owner: Otterdam Technology Group, LLC  State: Virginia Sampling Point: DP-29
Investigator(s): Lindsey Shortt, Julia Coan, WSSI Section, Township, Range:
Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 5
Subregion (LRR or MLRA): P 133A Lat: 36.79963892 Long: -77.51352843 Datum: NAD 83
Soil Map Unit Name: 10B3 - Craven clay loam, 2 to 6 percent slopes, severely eroded NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year?  Yes  No  (If no, explain in Remarks.)
<del>_</del> <del>_</del> <del>_</del>
Are Vegetation, Soil, or Hydrologynaturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.
.,
Hydrophytic Vegetation Present?  Yes No Is the Sampled Area  Within a Wetland?  Yes No Very No
Hydric Soil Present?  Yes No within a Wetland?  Yes No within a Wetland?  Yes No vithin a Wetland?
Remarks:
Data point was taken on a hillslope adjacent to a swamp in the eastern portion of the study
area. The area has recently been clearcut. Conditions are wetter than normal for this time of
year.
HYDROLOGY
Wetland Hydrology Indicators:  Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)  Surface Soil Cracks (B6)  Surface Notes (A1)  Surface (B1)
Surface Water (A1) Aquatic Fauna (B13) Sparsely Vegetated Concave Surface (B8)  High Water Table (A2)  Mark Deposits (B15) (LBB II) Projected Returns (B10)
High Water Table (A2) Saturation (A3) Marl Deposits (B15) (LRR U) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Moss Trim Lines (B16)
Saturation (A3) Hydrogen Sulfide Odor (C1) Moss Trim Lines (B16)  Water Marks (B1) Oxidized Rhizospheres on Living Roots (C3) Dry-Season Water Table (C2)
Sediment Deposits (B2)  Presence of Reduced Iron (C4)  Crayfish Burrows (C8)
Drift Deposits (B3)  Recent Iron Reduction in Tilled Soils (C6)  Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)  Thin Muck Surface (C7)  Geomorphic Position (D2)
Iron Deposits (B5) Other (Explain in Remarks) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)  FAC-Neutral Test (D5)
Water-Stained Leaves (B9) Sphagnum Moss (D8) (LRR T, U)
Field Observations:
Surface Water Present? Yes No Depth (inches):
Water Table Present? Yes No Depth (inches):
Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No
(includes capillary fringe)
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Remarks:
Remarks:  No water table or saturation observed within 24 inches from the ground surface.

r: FACU FAC FAC FAC	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: 0.00 (A/B)  Prevalence Index worksheet:  Total % Cover of: Multiply by:  OBL species 0 x 1 = 0  FACW species 0 x 2 = 0  FAC species 14 x 3 = 42  FACU species 25 x 4 = 100  UPL species 0 x 5 = 0  Column Totals: 39 (A) 142 (B)  Prevalence Index = B/A = 3.64  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 Four Vegetation Strata:  Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
FACU FAC FAC FAC	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: 0.00 (A/B)  Prevalence Index worksheet:  Total % Cover of: Multiply by:  OBL species 0 x1 = 0  FACW species 14 x3 = 42  FACU species 25 x4 = 100  UPL species 0 x5 = 0  Column Totals: 39 (A) 142 (B)  Prevalence Index = B/A = 3.64  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 Four Vegetation Strata:  Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
FACU FAC FAC FAC	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: 0.00 (A/B)  Prevalence Index worksheet:  Total % Cover of: Multiply by:  OBL species 0 x1 = 0  FACW species 14 x3 = 42  FACU species 25 x4 = 100  UPL species 0 x5 = 0  Column Totals: 39 (A) 142 (B)  Prevalence Index = B/A = 3.64  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 Four Vegetation Strata:  Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of
FACU FAC FAC FAC	Total Number of Dominant Species Across All Strata:  Percent of Dominant Species That Are OBL, FACW, or FAC:  O.00  Prevalence Index worksheet:  Total % Cover of:  Multiply by:  OBL species  Nultiply by:  OBL species  Nultiply by:  Multiply by:  OBL species  Nultiply by:  Nultiply by:  OBL species  Nultiply by:  OBL
FACU FAC FAC FAC	Species Across All Strata:  Percent of Dominant Species That Are OBL, FACW, or FAC:  O.00  Prevalence Index worksheet:  Total % Cover of:  Multiply by:  OBL species  0
FACU FAC FAC FAC	Percent of Dominant Species That Are OBL, FACW, or FAC: 0.00 (A/B)  Prevalence Index worksheet:  Total % Cover of: Multiply by:  OBL species 0 x 1 = 0  FACW species 14 x 3 = 42  FACU species 25 x 4 = 100  UPL species 0 x 5 = 0  Column Totals: 39 (A) 142 (B)  Prevalence Index = B/A = 3.64  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 Four Vegetation Strata:  Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of the present in the present in diameter at breast height (DBH), regardless of the present in the present i
FACU FAC FAC FAC	That Are OBL, FACW, or FAC: 0.00 (A/B)  Prevalence Index worksheet:  Total % Cover of: Multiply by:  OBL species 0 x1 = 0  FACW species 0 x2 = 0  FAC species 14 x3 = 42  FACU species 25 x4 = 100  UPL species 0 x5 = 0  Column Totals: 39 (A) 142 (B)  Prevalence Index = B/A = 3.64  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 Four Vegetation Strata:  Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of the strate in
FACU FAC FAC FAC	Prevalence Index worksheet:  Total % Cover of: Multiply by:  OBL species 0 x1 = 0  FACW species 14 x3 = 42  FACU species 25 x4 = 100  UPL species 0 x5 = 0  Column Totals: 39 (A) 142 (B)  Prevalence Index = B/A = 3.64  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 Four Vegetation Strata:  Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of the second strate in the second strate in the second strate in diameter at breast height (DBH), regardless of the second strate in diameter at breast height (DBH), regardless of the second strate in diameter at breast height (DBH), regardless of the second strate in the second
FACU FAC FAC FAC	Total % Cover of:  OBL species 0
FACU FAC FAC FAC	OBL species 0
FACU FAC FAC FAC	FACW species 0
FACU FAC FAC FAC	FAC species 14
FACU FAC FAC FAC	FACU species 25
FACU FAC FAC FAC	UPL species 0 x 5 = 0 Column Totals: 39 (A) 142 (B) Prevalence Index = B/A = 3.64  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 Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of
FACU FAC FAC FAC	Column Totals: 39 (A) 142 (B)  Prevalence Index = B/A = 3.64  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 Four Vegetation Strata:  Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of
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FACU FAC FAC FAC	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 Four Vegetation Strata:  Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of
FACU FAC FAC FAC	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 Four Vegetation Strata:  Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of
FACU FAC FAC FAC	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 Four Vegetation Strata:  Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of
FACU FAC FAC FAC	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 Four Vegetation Strata:  Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of
FACU FAC FAC FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of
FACU FAC FAC FAC	<ul> <li>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</li> <li>Definitions of Four Vegetation Strata:</li> <li>Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of more in diameter at breast height (DBH), regardless of</li> </ul>
FACU FAC FAC	present, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree – Woody plants, excluding vines, 3 in. (7.6 cm) o more in diameter at breast height (DBH), regardless of
FAC FAC	present, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree – Woody plants, excluding vines, 3 in. (7.6 cm) o more in diameter at breast height (DBH), regardless of
FAC FAC	present, unless disturbed or problematic.  Definitions of Four Vegetation Strata:  Tree – Woody plants, excluding vines, 3 in. (7.6 cm) o more in diameter at breast height (DBH), regardless of
FAC FAC	Definitions of Four Vegetation Strata:  Tree – Woody plants, excluding vines, 3 in. (7.6 cm) o more in diameter at breast height (DBH), regardless of
FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) o more in diameter at breast height (DBH), regardless of
	more in diameter at breast height (DBH), regardless of
FAC	
	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
r: 7.80	height.
. <u></u>	- Hydrophytic
%	Vegetation
r:	Present? Yes No No
9	7.80 - 7.80 - 7.80

VEGETATION Continued (Four Strata)	– Use scie	ntific names	of plants.	Sampling Point:
	Absolute	Dominant	Indicator	
Tree Stratum		Species?		Definitions of Four Vegetation Strata:
9				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
10.				more in diameter at breast height (DBH), regardless of
11.				height.
12.				Sapling/Shrub – Woody plants, excluding vines, less
13				than 3 in. DBH and greater than 3.28 ft (1 m) tall.
14				
15				Horb. All hards account (non-use shi) plants are resulted.
16.				<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
		=Total Cover		of size, and woody plants less than 3.20 it tall.
EOV of total cover				Woody Vine – All woody vines greater than 3.28 ft in
50% of total cover:		or total cover.		height.
Sapling/Shrub Stratum				neight.
9				
10				
11.				
12				
12.				
13.				
14				
15				
16				
		=Total Cover		
E00/ of total cover		of total cover:		
50% of total cover:		or total cover.		
Herb Stratum				
13				
14				
15.				
16.				
17.				
18				
19				
20				
21.				
22.				
23.				
24				
	39	=Total Cover		
50% of total cover: 19.5	20%	of total cover:	7.80	
Woody Vine Stratum				
7				
8				
9				
10.				
	,	=Total Cover		
50% of total cover:		of total cover:		
	-	or total cover.		
Remarks: (If observed, list morphological adaptatio	ns below.)			

Profile Desci	ription: (Describe t	o the de	pth needed to doc	ument tl	he indica	ator or c	onfirm the absence	e of indicators.)	
Depth	Matrix			x Featur					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Rer	narks
0 - 6	10YR 3/1	100					Loamy Sand		
6 - 15	10YR 5/3	80					Sand		
6 - 15	2.5Y 4/2	20					Sand	No redox obse	erved
15 - 18	10YR 5/2	60	2.5Y 5/4	40	С	М	Sand		
								_	
								_	_
								_	_
<sup>1</sup> Type: C=Co	ncentration, D=Depl	etion, RN	/I=Reduced Matrix, I	√S=Mas	ked San	d Grains	. <sup>2</sup> Location:	: PL=Pore Lining, M=	Matrix.
Hydric Soil I	ndicators: (Applica	ble to all	LRRs, unless other	erwise n	oted.)		Indicator	s for Problematic Hy	dric Soils³:
Histosol (	(A1)		Thin Dark S	urface (S	69) <b>(LRR</b>	S, T, U)	1 cm	Muck (A9) (LRR O)	
Histic Epi	ipedon (A2)		Barrier Islan	ds 1 cm	Muck (S	12)	2 cm	Muck (A10) (LRR S)	
Black His	stic (A3)		(MLRA 15	3B, 153	D)		Coas	t Prairie Redox (A16)	
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A)									
Stratified	Layers (A5)		Loamy Gley	ed Matri	x (F2)		Redu	ced Vertic (F18)	
Organic E	Bodies (A6) (LRR P,	T, U)	Depleted Ma	atrix (F3)	1		(ou	tside MLRA 150A, 1	50B)
5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6) Piedmont Floodplain Soils (F19) (LRR P, T							(F19) <b>(LRR P, T)</b>		
Muck Pre	esence (A8) (LRR U)		Depleted Da	ırk Surfa	ce (F7)		Anom	nalous Bright Floodpla	in Soils (F20)
1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B)									
Depleted Below Dark Surface (A11)									
Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151)Very Shallow Dark Surface (F22)							(F22)		
Coast Pra	airie Redox (A16) (M	LRA 150	Iron-Mangar	nese Ma	sses (F1	2) <b>(LRR</b>	O, P, T)	(outside MLRA 138,	152A in FL, 154)
Iron Mone	osulfide (A18)		Umbric Surf	ace (F13	3) (LRR F	P, T, U)	Other	(Explain in Remarks	)
Sandy Mi	ucky Mineral (S1) <b>(L</b>	RR O, S)	Delta Ochric	(F17) <b>(</b>	VILRA 15	51)			
Sandy GI	eyed Matrix (S4)		Reduced Ve	rtic (F18	) (MLRA	150A, 1	50B) <sup>3</sup> Indic	ators of hydrophytic v	egetation and
Sandy Re	edox (S5)		Piedmont FI	oodplain	Soils (F	19) <b>(MLF</b>	RA 149A)		
Stripped	Matrix (S6)		Anomalous	Bright Fl	oodplain	Soils (F2	20)		
Dark Surf	face (S7) <b>(LRR P, S</b> ,	T, U)	(MLRA 14	9A, 153	C, 153D	)			
	e Below Surface (S8)	)	Very Shallov	v Dark S	Surface (F	<del>-</del> 22)	we	tland hydrology must	be present,
(LRR S	S, T, U)		(MLRA 13	8, 152A	in FL, 1	54)	unl	less disturbed or prob	lematic.
	ayer (if observed):								
Type: Depth (in	ches):						Hydric Soil Pres	sent? Yes	No ✔
							Hydric 30ii Fre	Seiit: 165	
Remarks:									
Layer wi	th depleted r	natrix	starts too fa	ar do۱	wn to	meet	F3. Hydric s	soil indicators	not
observe	d								
00000140	<b>u.</b>								



Photograph 56: View of uplands at Data Point 29.

# WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Franklin - Kistler Tract City/County: Greensville County Sampling Date: 2025-05-0
Applicant/Owner: Otterdam Technology Group, LLC State: Virginia Sampling Point: DP-30
Investigator(s): Lindsey Shortt, Julia Coan, WSSI Section, Township, Range:
Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 1
Subregion (LRR or MLRA): P 133A Lat: 36.79972061 Long: -77.51348314 Datum: NAD 83
Soil Map Unit Name: 31A - Roanoke loam, 0 to 2 percent slopes, frequently flooded NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year?  Yes  No  (If no, explain in Remarks.)
Are Vegetation $\checkmark$ , Soil , or Hydrology $\checkmark$ significantly disturbed? Are "Normal Circumstances" present? Yes No $\checkmark$
Are Vegetation, Soil, or Hydrologynaturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present?  Yes No Is the Sampled Area
Hydric Soil Present? Yes V No within a Wetland? Yes No No
Wetland Hydrology Present? Yes   ✓ No  Remarks:
Data point taken in a swale draining to a forested swamp in the eastern portion of the study
area. Vegetative cover is low due to recent clearcutting. Conditions wetter than normal for
this time of year.
HYDROLOGY
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)  Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B13) Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)  Marl Deposits (B15) (LRR U)  Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide Odor (C1) Moss Trim Lines (B16)
Water Marks (B1) Oxidized Rhizospheres on Living Roots (C3) Dry-Season Water Table (C2)
Sediment Deposits (B2)  Presence of Reduced Iron (C4)  Crayfish Burrows (C8)
Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Thin Muck Surface (C7) Geomorphic Position (D2)
Iron Deposits (B5) Other (Explain in Remarks) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) FAC-Neutral Test (D5)
Water-Stained Leaves (B9) Sphagnum Moss (D8) (LRR T, U)
Field Observations:
Surface Water Present? Yes No Depth (inches):
Water Table Present? Yes No Depth (inches): 8
Saturation Present? Yes No Depth (inches): 7 Wetland Hydrology Present? Yes No No
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Describe Recorded Data (stream gauge, monitoring well, aenai priotos, previous inspections), il available.
Remarks:
Wetland hydrology indicators observed.
Wettaria flyarology malcators observed.

TION (Four Strata) – Use scienti	fic names	of plants.		Sampling Point: DP-30
(Distriction of the control of the c	Absolute	Dominant	Indicator	Damin and Taxton data at
um (Plot size: 30 ft r	% Cover 15	Species?	Status FAC	Dominance Test worksheet:
nus caroliniana				Number of Dominant Species
cus alba	5		FACU	That Are OBL, FACW, or FAC: 3 (A)
				Total Number of Dominant
				Species Across All Strata: 4 (B)
				Percent of Dominant Species
				That Are OBL, FACW, or FAC: 75.00 (A/B)
				Prevalence Index worksheet:
				Total % Cover of: Multiply by:
		=Total Cover		OBL species <u>5</u> x 1 = <u>5</u>
50% of total cover: 10.0	0 20%	of total cover:	4.00	FACW species $0   x 2 = 0$
nrub Stratum (Plot size: 30 ft r )	)			FAC species 60 x 3 = 180
				FACU species 12 x 4 = 48
				UPL species 0 x 5 = 0
				Column Totals: 77 (A) 233 (B)
				Prevalence Index = B/A = 3.02
				Hydrophytic Vegetation Indicators:
				Rapid Test for Hydrophytic Vegetation
				2 - Dominance Test is >50%
				3 - Prevalence Index is ≤3.0 <sup>1</sup>
	<del></del>	=Total Cover		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
50% of total cover:		of total cover:		residentials right opiny to vegetation (Explain)
um (Plot size: 30 ft r )		or total cover.	· ——	
	25		FAC	
rium asplenioides			FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must b
axon hispidus ox rotundifolia	10			present, unless disturbed or problematic.
	8		FAC	Definitions of Four Vegetation Strata:
eola virginiana	5		FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of
dwardia areolata	5		OBL	more in diameter at breast height (DBH), regardless o height.
rubrum	2		FAC	noight.
nus caroliniana ssp. caroliniana	2			Sapling/Shrub – Woody plants, excluding vines, less
cus alba	2		FACU	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.
	59 =	=Total Cover		Woody Vine – All woody vines greater than 3.28 ft in
50% of total cover: 29.5	20%	of total cover:	11.80	height.
ne Stratum (Plot size: 30 ft r )				
		tal Cover 20%		Hydrophytic
FOO/ of total cover:				Vegetation
50% of total cover:		of total cover:		Present? Yes No No
(If observed, list morphological adaptatio	ns below.)			
hytic vegetation observe	Н			
iny do vegetation observed	J.			
	ns below.)	or total covers		Tresent: TesNo

	itilio riarrioc	of plants.	Sampling Point:
Absolute	Dominant	Indicator	
% Cover	Species?	Status	Definitions of Four Vegetation Strata:
			Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of
			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.
			Harb All back as a second as a second as a second as
			<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
20	=Total Cover		of size, and woody plants less than 3.20 it tail.
		4 00	Woody Vine – All woody vines greater than 3.28 ft in
2078	or total cover.	-1.00	height.
			no.gna
	or total cover.		
		-	
59	=Total Cover		
0 20%	of total cover:	11.80	
	-Total Cavar		
	=Total Cover		T .
	of total cover:		
	20 20% 20 20% 20% 20% 20%	20 =Total Cover 20% of total cover:  =Total Cover 20% of total cover:	20 =Total Cover 20% of total cover: 4.00  =Total Cover 20% of total cover:  =Total Cover 20% of total cover:  11.80

	-	to the de	pth needed to docu			ator or c	onfirm th	ne absence	of indicators.)		
Depth (inches)	Matrix	0/		x Featu		1002	To		Domorko		
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>		exture	Remarks		
0 - 8	2.5Y 2.5/1	100					Sandy	Loam			
8 - 18	2.5Y 5/2	95	2.5Y 5/1	5	D	М	Sand				
-											
-								_			
-											
<sup>1</sup> Type: C=Co	ncentration, D=Dep	letion, RN	/=Reduced Matrix, N	/IS=Mas	ked San	d Grains		<sup>2</sup> Location:	PL=Pore Lining, M=Matrix.		
			LRRs, unless other						for Problematic Hydric Soils <sup>3</sup> :		
Histosol			Thin Dark Su			S, T, U)		1 cm N	Muck (A9) <b>(LRR O)</b>		
Histic Ep	ipedon (A2)		Barrier Island	ds 1 cm	Muck (S	312)		2 cm N	Muck (A10) (LRR S)		
Black His	stic (A3)		(MLRA 15	3B, 153	3D)			Coast	Prairie Redox (A16)		
	Sulfide (A4)		Loamy Muck		-	LRR O)			side MLRA 150A)		
	Layers (A5)		Loamy Gleye			,		-	ed Vertic (F18)		
	Bodies (A6) (LRR P,	, T, U)	Depleted Ma		, ,				side MLRA 150A, 150B)		
_	cky Mineral (A7) (LR							-	ont Floodplain Soils (F19) (LRR P, T)		
	esence (A8) (LRR U		Depleted Da						alous Bright Floodplain Soils (F20)		
	ck (A9) (LRR P, T)	•	Redox Depre						RA 153B)		
	Below Dark Surface	e (A11)	 Marl (F10) <b>(L</b>		` ,			Red Pa	arent Material (F21)		
•	rk Surface (A12)	,	Depleted Oc	-	1) <b>(MLR</b>	A 151)		Very S	hallow Dark Surface (F22)		
	airie Redox (A16) ( <b>N</b>	/ILRA 150				-	O, P, T)	-	outside MLRA 138, 152A in FL, 154)		
	osulfide (A18)		Umbric Surfa					-	Explain in Remarks)		
	ucky Mineral (S1) <b>(L</b>	.RR O. S)				-			,		
	eyed Matrix (S4)	-, -,	Reduced Ve			-	50B)	<sup>3</sup> Indica	tors of hydrophytic vegetation and		
Sandy Re			Piedmont Flo	•			•		tore of riyarophytic vogetation and		
-	Matrix (S6)		Anomalous I				-				
	face (S7) <b>(LRR P, S</b>	s. T. U)	(MLRA 14	-			/				
	e Below Surface (S8	-	Very Shallov	•	•	•		wetl	and hydrology must be present,		
(LRR S		,	(MLRA 13				unless disturbed or problematic.				
Restrictive L	ayer (if observed):										
Type:											
Depth (in	ches):						Hydri	c Soil Pres	ent? Yes <u>/</u> No		
Remarks:											
Hydric s	oil indicator <i>i</i>	A11 ok	served.								



Photograph 57: View of wetlands at Data Point 30. This area was recently subject to clearcutting.

# WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Frankin - Kistler Tr	ract	City/County: Greens	ville County S	Sampling Date: 2025-05-06							
Applicant/Owner: Otterdam Technol				Sampling Point: DP-31							
Investigator(s): Nikolai Karlov, Jackson Livingstone, J	Jillian Burgan, Kyle Zinn, WSSI Se	ection, Township, Range:									
Landform (hillside, terrace, etc.): Drainage	eway Local	I relief (concave, convex,	none): Concave	Slope (%): 5							
Subregion (LRR or MLRA): P 133A			-77.52072363	Datum: NAD 83							
Soil Map Unit Name: 10C3 - Craven clay	_										
<del></del>											
Are climatic / hydrologic conditions on the site				plain in Remarks.)							
Are Vegetation, Soil, or Hydrolo			Circumstances" present?								
Are Vegetation, Soil, or Hydrologynaturally 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_ <b>✓</b> _	Is the Sampled Area									
Hydric Soil Present?	Yes No V	within a Wetland?	Yes	No							
Wetland Hydrology Present?	Yes ✓ No		· 								
Remarks: Data point taken in a drainag	eway draining in	to adjacent stre	am/swamp syst	em. Soils are							
non-hydric and the area app	eared to have be	en very recently	v clear-cut. Base	ed on the large-							
scale removal of existing veg		•	•	_							
		01 001101a010a a	Morrial Collais.								
wetter than normal for this ti	me or year.										
HYDROLOGY			C lastication (w	A company that all							
Wetland Hydrology Indicators:				ninimum of two required)							
Primary Indicators (minimum of one is require			Surface Soil Cracks	` '							
Surface Water (A1)	Aquatic Fauna (B13)			I Concave Surface (B8)							
High Water Table (A2)	Marl Deposits (B15) (LI	· · · · · · · · · · · · · · · · · · ·	Drainage Patterns (								
Saturation (A3)	Hydrogen Sulfide Odor		Moss Trim Lines (B	·							
Water Marks (B1)	Oxidized Rhizospheres	-	Dry-Season Water								
Sediment Deposits (B2)	Presence of Reduced I	ron (C4)	Crayfish Burrows (C	(8)							
Drift Deposits (B3)	Recent Iron Reduction	in Tilled Soils (C6)	Saturation Visible or	n Aerial Imagery (C9)							
Algal Mat or Crust (B4)	Thin Muck Surface (C7	')	Geomorphic Position	n (D2)							
Iron Deposits (B5)	Other (Explain in Rema	arks)	Shallow Aquitard (D	03)							
Inundation Visible on Aerial Imagery (B7)			FAC-Neutral Test (D	D5)							
Water-Stained Leaves (B9)			Sphagnum Moss (D	98) (LRR T, U)							
Field Observations:											
Surface Water Present? Yes 🗸	No Depth (inches)	): 0									
Water Table Present? Yes ✓	No Depth (inches)	): 8									
Saturation Present? Yes	No Depth (inches)		Hydrology Present?	Yes ✓ No							
(includes capillary fringe)											
Describe Recorded Data (stream gauge, mon	itoring well, aerial photos, r	previous inspections), if a	vailable:								
Remarks:			_								
Wetland hydrology indicators	s observed. Note	that data point	was taken after	recent raintall							
and localized compaction du	e to vegetation re	emoval, leading	to ponding.								
•		, _									

EGETATION (Five Strata) – Use scie		Daminant	la dia atau	Sampling Point: DP-31
Free Stratum (Plot size: 30 ft r	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
·				Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
				Total Number of Dominant
·				Species Across All Strata: 3 (B)
				Percent of Dominant Species
i				That Are OBL, FACW, or FAC: 33.33 (A/B)
		=Total Cover		Prevalence Index worksheet:
50% of total cover:	20%	of total cover:		Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 30 ft r )				OBL species 0 x 1 = 0
·				FACW species $0   x 2 = 0$
				FAC species $12$ $x 3 = 36$
				FACU species 10 x 4 = 40
				UPL species $0   x 5 = 0$
				Column Totals: 22 (A) 76 (B
i				Prevalence Index = B/A = 3.45
	=	=Total Cover		Hydrophytic Vegetation Indicators:
50% of total cover:	20%	of total cover:	:	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30 ft r )				2 - Dominance Test is >50%
·				3 - Prevalence Index is ≤3.0 <sup>1</sup>
				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
S				
l				
5.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must b
5				present, unless disturbed or problematic.
	=	=Total Cover		Definitions of Five Vegetation Strata:
50% of total cover:	20%	of total cover:	·	Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 30 ft r ) . Acer rubrum	8	V	FAC	approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
Liriodendron tulipifera	5	<u> </u>	FACU	Sapling – Woody plants, excluding woody vines,
Oxydendrum arboreum	5		FACU	approximately 20 ft (6 m) or more in height and less
Aralia spinosa	2		FAC	than 3 in. (7.6 cm) DBH.
Ilex opaca	2		FAC	Shrub - Woody Plants, excluding woody vines,
i.				approximately 3 to 20 ft (1 to 6 m) in height.
				<b>Herb</b> – All herbaceous (non-woody) plants, including
				herbaceous vines, regardless of size, and woody
·				plants, except woody vines, less than approximately 3
0.				ft (1 m) in height.
1.				Woody Vine – All woody vines, regardless of height.
	22	Total Cover		
50% of total cover: 1°	1.00 20%	of total cover:	4.40	
Voody Vine Stratum (Plot size: 30 ft r	)			
· · · · · · · · · · · · · · · · · · ·	ı			
2.				
3.				
· ·				
5.				L
		Tatal Cause		Hydrophytic
	=	=Total Cover		Vegetation

# **VEGETATION Continued (Five Strata)** – Use scientific names of plants. Sampling Point: DP-31

Tree - Woody plants, excluding woody vines, approximately 20 if (6 m) or more in height and 3 in. (7,6 m) or larger in diameter at breast height (DBH).    10	Tree Stratum		Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Five Vegetation Strata:
8				<del></del>		
9.	0					
10						
11	-					Conline Woody plants avaluding woody vines
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 into size, and woody vines, regardless of height.   Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody into size, and woody vines, regardless of height.   Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody into size, and woody vines, regardless of height.   Woody Vine - All woody vines, regardless of height.   Woody Vine -	11					
Total Cover   20% of total cover:   20% of	12					
Sapling Stratum						Shrub - Woody Plants, excluding woody vines.
Sapling Stratum   7.		50% of total cover:				
7.	Sapling Stratum					Harb All harbassaus (non woody) plants including
8.	7.					
9.	^					plants, except woody vines, less than approximately 3
10.	•	<del>-</del>		<u> </u>		ft (1 m) in height.
11. 12.	40					Woody Vine - All woody vines, regardless of height.
Total Cover   Shrub Stratum   30 ft r   7.						
Shrub Stratum   30 ft r   20% of total cover:	40					
Shrub Stratum   30 ft r				=Total Cover		
7. 8. 9. 10. 11. 12.  —=Total Cover  50% of total cover:  —20% of total cover:  Herb Stratum  12.  13.  14.  15.  16.  17.  18.  19.  20.  21.  22.  —Total Cover		50% of total cover:	20%	of total cover:		
8. 9. 10. 11. 12.	Shrub Stratum	30 ft r				
8. 9. 10. 11. 12.	7.					
10.	^					
11	9					
Total Cover	10					
	11					
50% of total cover:	12					
Herb Stratum						
12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. =Total Cover		50% of total cover:	20%	of total cover:		
13						
14	12					
15						
16						
17						
18						
19	-					
20	-					
21	•					
22=Total Cover						
22 =Total Cover	<u></u>					
	ZZ		22	-Total Cover		
DIAM OF TOTAL COVER. THE TIME STAND OF TOTAL COVER, A AND T		50% of total cover: 11.0			4 40	
Woody Vine Stratum	Woody Vine Stratum	11.0	2070	or total oover.		
6.	•					
7.						
8.						
9.	-					
10.		_				
=Total Cover				=Total Cover		
50% of total cover: 20% of total cover:		50% of total cover:				
Remarks: (If observed, list morphological adaptations below.)	Remarks: (If observed, li	ist morphological adaptation	ns below.)			•

Profile Desc	ription: (Describe t	o the de	pth needed to docu	ıment th	ne indica	tor or c	onfirm the absen	ce of indic	ators.)				
Depth													
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Texture Remarks					
0 - 2	2.5Y 3/1	100					Silt Loam						
2 - 10	2.5Y 5/3	100			-		Silt Loam						
10 - 24	2.5Y 6/4	95	10YR 5/6	5	С	М	Silty Clay Loa	m					
-													
<u> </u>													
¹Type: C=Co	ncentration, D=Depl	etion, RM	=Reduced Matrix, N	//S=Mas	ked Sand	d Grains	<sup>2</sup> Locatio	n: PL=Pore	E Lining, M=N	∕latrix.	_		
Hydric Soil I	ndicators: (Applica	ble to all	LRRs, unless other	rwise n	oted.)		Indicate	ors for Pro	blematic Hy	dric Soils³:			
Histosol	(A1)		Thin Dark Su	urface (S	9) <b>(LRR</b>	S, T, U)	1 cr	n Muck (A9	) (LRR O)				
Histic Ep	ipedon (A2)		Barrier Island	ds 1 cm	Muck (S	12)	2 cr	n Muck (A1	0) (LRR S)				
Black His	tic (A3)		(MLRA 15	3B, 153	D)		Coa	st Prairie R	edox (A16)				
Hydroger	Sulfide (A4)		Loamy Muck	y Minera	al (F1) <b>(L</b>	RR O)	(o	utside MLI	RA 150A)				
Stratified	Layers (A5)		Loamy Gleye	ed Matrix	x (F2)		Red	luced Vertic	(F18)				
Organic I	Bodies (A6) (LRR P,	T, U)	Depleted Ma	trix (F3)			(o	utside MLI	RA 150A, 15	0B)			
5 cm Mu	cky Mineral (A7) (LR	R P, T, U	Redox Dark	Surface	(F6)		Pied	dmont Floor	dplain Soils (	F19) <b>(LRR P, T)</b>	)		
Muck Pre	esence (A8) (LRR U)		Depleted Da	rk Surfa	ce (F7)		And	malous Bri	ght Floodplai	n Soils (F20)			
1 cm Mud	ck (A9) (LRR P, T)		Redox Depre	essions	(F8)		(N	ILRA 153B	)				
Depleted	Below Dark Surface	(A11)	Marl (F10) <b>(L</b>	.RR U)			Rec	l Parent Ma	terial (F21)				
Thick Da	rk Surface (A12)		Depleted Oc	hric (F1	1) <b>(MLR</b>	151)	Ver	y Shallow D	ark Surface	(F22)			
Coast Pra	airie Redox (A16) ( <b>M</b>	LRA 150	Iron-Mangan	ese Mas	sses (F12	2) <b>(LRR</b>	O, P, T)	(outside	MLRA 138,	152A in FL, 154	)		
Iron Mon	osulfide (A18)		Umbric Surfa	ace (F13	) (LRR F	, T, U)	Oth	er (Explain	in Remarks)				
Sandy M	ucky Mineral (S1) (L	RR O, S)	Delta Ochric	(F17) <b>(N</b>	ILRA 15	1)							
Sandy G	eyed Matrix (S4)		Reduced Ve	rtic (F18	) (MLRA	150A, 1	<b>50B)</b> <sup>3</sup> Ind	icators of h	ydrophytic ve	egetation and			
Sandy Re	edox (S5)		Piedmont Flo	oodplain	Soils (F	19) <b>(MLF</b>							
Stripped	Matrix (S6)		Anomalous E	Bright Flo	oodplain	Soils (F	20)						
Dark Sur	face (S7) <b>(LRR P, S</b> ,	T, U)	(MLRA 14	9A, 153	C, 153D)	)							
Polyvalue	e Below Surface (S8)	)	Very Shallow	/ Dark S	urface (F	22)	W	etland hydi	ology must b	e present,			
(LRR S	S, T, U)		(MLRA 13	8, 152A	in FL, 1	54)	unless disturbed or problematic.						
	ayer (if observed):												
Type:													
	ches):						Hydric Soil Pr	esent?	Yes	No			
Remarks:													
Hydric s	oil indicators	not o	bserved.										



Photograph 58: View of uplands at Data Point 31. This area was recently subject to clearcutting.



Photograph 59: View of non-hydric soil profile at Data Point 31.

# WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Frankin - Kistler Tract	City/County: Greens	sville County Sampling Date: 2025-05
Applicant/Owner: Otterdam Technology Group,		State: Virginia Sampling Point: DP-32
Investigator(s): Nikolai Karlov, Jackson Livingstone, Jillian Burgan, Kyle Zir	ın, WSSI Section, Township, Range:	
Landform (hillside, terrace, etc.): Toeslope	Local relief (concave, convex,	
Subregion (LRR or MLRA): P 133A Lat: 36.79		-77.52043028 Datum: NAD 8
Soil Map Unit Name: 40A - Woodington fine sandy	_	7.1020.0020
Are climatic / hydrologic conditions on the site typical for this time	ne of year? Yes	No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology signific	antly disturbed? Are "Normal of	Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology natural	ly problematic? (If needed, ex	cplain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sho	wing sampling point locat	ions, transects, important features, et
Hydrophytic Vegetation Present? Yes V No	Is the Sampled Area	
Hydric Soil Present? Yes V No		Yes ✔ No
Wetland Hydrology Present? Yes   ✓ No		<del></del>
Remarks: Data point taken on a toeslope tying int	o an adiacent stream	/swamp system. The area
appeared to have been very recently cl	•	• •
vegetation, this is not considered a Nor		
time of year.	mai condition. condi	don's wetter than normal for this
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that a	appl <u>y)</u>	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Faun		Sparsely Vegetated Concave Surface (B8)
<del></del>	s (B15) <b>(LRR U)</b>	Drainage Patterns (B10)
<del></del>	Ifide Odor (C1)	Moss Trim Lines (B16)
<u> </u>	zospheres on Living Roots (C3)	Dry-Season Water Table (C2)
<del></del>	Reduced Iron (C4)	Crayfish Burrows (C8)
<del></del>	Reduction in Tilled Soils (C6)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)  Thin Muck St		Geomorphic Position (D2)
<u> </u>	in in Remarks)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	,	FAC-Neutral Test (D5)
Water-Stained Leaves (B9)		Sphagnum Moss (D8) (LRR T, U)
Field Observations:		
	th (inches): 0	
	th (inches): 9	
		Hydrology Present? Yes ✔ No
(includes capillary fringe)	<u> </u>	
Describe Recorded Data (stream gauge, monitoring well, aeria	l photos, previous inspections), if a	available:
Remarks:	_	
Wetland hydrology indicators observed	l	
wettand hydrology malcators observed		

**VEGETATION (Five Strata)** – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1.				Number of Dominant Species
2				That Are OBL, FACW, or FAC: 2 (A)
3.				Total Number of Dominant
4.				Species Across All Strata: 2 (B)
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)
		=Total Cover		Prevalence Index worksheet:
50% of total cover:	20%	of total cover:		Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 30 ft r )				OBL species 0 $x = 0$
1.				FACW species 36
2.				FAC species 2 x 3 = 6
3.				FACU species 3 x 4 = 12
4.				UPL species $0   x 5 = 0$
5.				Column Totals: 41 (A) 90 (B)
6.				Prevalence Index = B/A = 2.19
		=Total Cover		Hydrophytic Vegetation Indicators:
50% of total cover:	20%	of total cover:		✓ 1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30 ft r )				✓ 2 - Dominance Test is >50%
1				✓ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
2.				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.				
4.				
5.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be
6.				present, unless disturbed or problematic.
·		=Total Cover		Definitions of Five Vegetation Strata:
50% of total cover:	20%	of total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 30 ft r )				approximately 20 ft (6 m) or more in height and 3 in.
Clethra alnifolia	15	<b>✓</b>	FACW	(7.6 cm) or larger in diameter at breast height (DBH).
2. Osmundastrum cinnamomeum	10		FACW	Sapling – Woody plants, excluding woody vines,
3. Arundinaria tecta	8		FACW	approximately 20 ft (6 m) or more in height and less
4. Medeola virginiana	3		FACU	than 3 in. (7.6 cm) DBH.
5. Onoclea sensibilis	3		FACW	Shrub - Woody Plants, excluding woody vines,
6. Acer rubrum	2		FAC	approximately 3 to 20 ft (1 to 6 m) in height.
7.				Herb – All herbaceous (non-woody) plants, including
8.				herbaceous vines, regardless of size, and woody
9.				plants, except woody vines, less than approximately 3
10.				ft (1 m) in height.
11.				Woody Vine – All woody vines, regardless of height.
	41	=Total Cover		
50% of total cover: 20.			8 20	
	50 20%	of total cover:	0.20	
	<u>50</u> 20%	of total cover:	0.20	
Woody Vine Stratum (Plot size: 30 ft r )  1.	<u>50                                    </u>	of total cover:	0.20	
Woody Vine Stratum (Plot size: 30 ft r )	5 <b>0</b> 20%	of total cover:	0.20	
Woody Vine Stratum (Plot size: 30 ft r )  1.	50 20% 	of total cover:		
Woody Vine Stratum (Plot size: 30 ft r )  1 2.		of total cover:		
Woody Vine Stratum         (Plot size: 30 ft r )           1.		of total cover:		
Woody Vine Stratum       (Plot size: 30 ft r )         1.         2.         3.         4.				Hydrophytic Vocatation
Woody Vine Stratum       (Plot size: 30 ft r )         1.         2.         3.         4.		=Total Cover		Hydrophytic Vegetation Present? Yes ✔ No
Woody Vine Stratum (Plot size: 30 ft r )   1.		=Total Cover		Vegetation

Sampling Point: <u>DP-</u>32

# **VEGETATION Continued (Five Strata)** – Use scientific names of plants. Sampling Point: DP-32

Tree Stratum		Absolute	Dominant	Indicator	Definitions of Five Vegetation Strate.
7.		% Cover	Species?	Status	Definitions of Five Vegetation Strata:
					<b>Tree</b> – 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).
					October Western Lands and a state of the sta
4.4					Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
					than 3 in. (7.6 cm) DBH.
12.			=Total Cover		Shrub - Woody Plants, excluding woody vines,
	50% of total cover:		of total cover:		approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum			0. 1010. 0070		Horb All horboscopy (non-veschy) plants including
· -					<b>Herb</b> – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, <u>and</u> woody
_					plants, except woody vines, less than approximately 3
_					ft (1 m) in height.
40					Woody Vine - All woody vines, regardless of height.
			=Total Cover		
	50% of total cover:	20%	of total cover:		
Shrub Stratum	30 ft r				
7.					
_					
0					
4.0					
12.					
			=Total Cover		
	50% of total cover:	20%	of total cover:		
Herb Stratum					
12					
14					
4 =					
16					
17					
18					
19					
20					
21					
22.					
			=Total Cover		
	50% of total cover: <b>20.5</b>	<u>0</u> 20%	of total cover:	8.20	
Woody Vine Stratum					
6.					
7.					
8.					
9.					
10					
	500/ - (1-1-1		=Total Cover		
	50% of total cover:		of total cover:		
Remarks: (If observed, li	ist morphological adaptation	s below.)			

Profile Desc	ription: (Describe t	o the de	pth needed to doc	ument t	he indica	ator or c	onfirm the absenc	e of indic	ators.)	
Depth	Matrix			x Featur						
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	arks		
0 - 5	2.5Y 4/1	100					Sandy Loam silty as well			
5 - 24	2.5Y 4/1	90	2.5Y 6/3	10	С	М	Sand			
							-			
-										
								_		
-										
	oncentration, D=Depl					d Grains			e Lining, M=N	
-	ndicators: (Applica	bie to ali	Thin Dark St		-	8 T IIV			blematic Hy	aric Solis":
Histosol	ipedon (A2)		Barrier Islan	•	, .		<u></u>		0) (LRR O) 0) (LRR S)	
Black His			(MLRA 15			12)			Redox (A16)	
	n Sulfide (A4)		Loamy Muck		•	.RR O)			RA 150A)	
	Layers (A5)		Loamy Gley	•		,	•	ced Vertic	•	
Organic	Bodies (A6) (LRR P,	T, U)	Depleted Ma	atrix (F3)	)		(ou	tside ML	RA 150A, 15	0B)
5 cm Mu	cky Mineral (A7) <b>(LR</b>	R P, T, U	Redox Dark	Surface	(F6)		Pied	mont Floo	dplain Soils (	F19) <b>(LRR P, T)</b>
Muck Pre	esence (A8) (LRR U)		Depleted Da	rk Surfa	ce (F7)		Anon	nalous Bri	ght Floodplai	in Soils (F20)
	ck (A9) (LRR P, T)		Redox Depre		(F8)			_RA 153B	-	
-	Below Dark Surface	(A11)	Marl (F10) (I	-	() (B. 1) D				iterial (F21)	(500)
	rk Surface (A12)	I DA 450	Depleted Oc			-			Dark Surface	
	airie Redox (A16) ( <b>M</b> osulfide (A18)	LKA 150	Iron-Mangar Umbric Surfa		,				in Remarks)	152A in FL, 154)
	ucky Mineral (S1) <b>(L</b>	RR O S)			-	-	Ottle	(Ехріаііі	iii ixeiliaiks)	
-	leyed Matrix (S4)	itit 0, 0,	Reduced Ve				1 <b>50B)</b> <sup>3</sup> India	ators of h	vdrophytic ve	egetation and
✓ Sandy R			Piedmont Flo	•			,	01010 0111	yaropriyao v	ogotation and
	Matrix (S6)		Anomalous I				· ·			
Dark Sur	face (S7) (LRR P, S,	T, U)	(MLRA 14	9A, 153	C, 153D	)				
	e Below Surface (S8)	)	Very Shallov	v Dark S	Surface (F	-22)	we	tland hyd	rology must b	oe present,
(LRR S	S, T, U)		(MLRA 13	8, 152A	in FL, 1	54)	un	less distu	bed or probl	ematic.
Restrictive L	ayer (if observed):									
Type:										
Depth (in	nches):						Hydric Soil Pre	sent?	Yes 🗸	No
Remarks:							•			
Hydric s	oil indicator S	S5 ob:	served.							
•										



Photograph 60: View of wetlands at Data Point 32. This area was recently subject to clearcutting.



Photograph 61: View of hydric soil profile at Data Point 32.

# WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Frankin - Kistler Tract City/County: Greensville County Sampling Date: 2025-05-0							
Applicant/Owner: Otterdam Technology Group, LLC  State: Virginia Sampling Point: DP-33							
Investigator(s): Nikolai Karlov, Jackson Livingstone, Jillian Burgan, Kyle Zinn, WSSI Section, Township, Range:							
Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 3							
Subregion (LRR or MLRA): P 133A Lat: 36.79538746 Long: -77.51857251 Datum: NAD 8							
Soil Map Unit Name: 10C3 - Craven clay loam, 6 to 12 percent slopes, severely eroded NWI classification: None							
Are climatic / hydrologic conditions on the site typical for this time of year?  Yes  No  (If no, explain in Remarks.)							
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No							
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)							
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.							
Hydrophytic Vegetation Present? Yes ✓ No Is the Sampled Area							
Hydric Soil Present?  Yes  No  within a Wetland?  Yes  No  V							
Wetland Hydrology Present? Yes No 🗸							
Remarks: Data point taken in a depressional swale draining into adjacent stream/swamp system.							
Nonhydric soils and the area appeared to have been very recently clear-cut. Based on the							
large-scale removal of existing vegetation, this is not considered a Normal Condition.							
Conditions wetter than normal for this time of year.							
HYDROLOGY  Outside the first of							
Wetland Hydrology Indicators:  Secondary Indicators (minimum of two required)  Primary Indicators (minimum of one is required; check all that apply)  Surface Soil Cracks (R6)							
Primary Indicators (minimum of one is required; check all that apply)  Surface Soil Cracks (B6)  Surface Water (A1)  Surface Water (A1)							
Surface Water (A1) Aquatic Fauna (B13) Sparsely Vegetated Concave Surface (B8)  High Water Table (A2) Mark Deposits (B15) (LPP II) Prainage Patterns (B10)							
High Water Table (A2)  Marl Deposits (B15) (LRR U)  Drainage Patterns (B10)  Saturation (A3)  Hydrogon Sulfide Oder (C1)  Mass Trim Lines (B16)							
Saturation (A3) Hydrogen Sulfide Odor (C1) Moss Trim Lines (B16)  Water Marks (B1) Ovidized Phizospheres on Living Boots (C2) Phy Season Water Table (C2)							
Water Marks (B1) Oxidized Rhizospheres on Living Roots (C3) Dry-Season Water Table (C2)							
Sediment Deposits (B2)  Presence of Reduced Iron (C4)  Crayfish Burrows (C8)  Proposite (B2)  Presence of Reduced Iron (C4)  Crayfish Burrows (C8)  Seturation Visible on Aerial Imagery (C0)							
Drift Deposits (B3)  Recent Iron Reduction in Tilled Soils (C6)  Saturation Visible on Aerial Imagery (C9)  Thin Muck Surface (C7)  Comparable Resition (D3)							
Algal Mat or Crust (B4)  Thin Muck Surface (C7)  Geomorphic Position (D2)  Shallow Aguitard (D2)							
Iron Deposits (B5) Other (Explain in Remarks) Shallow Aquitard (D3) FAC Neutral Test (D5)							
Inundation Visible on Aerial Imagery (B7)  FAC-Neutral Test (D5)  Sphermum Mess (D0) (LRR T. LI)							
Water-Stained Leaves (B9)  Sphagnum Moss (D8) (LRR T, U)							
Field Observations:							
Surface Water Present? Yes V No Depth (inches): 0							
Water Table Present? Yes No _ Depth (inches):							
Saturation Present? Yes No _ Depth (inches): Wetland Hydrology Present? Yes No _ V							
(includes capillary fringe)							
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
Remarks:							
Standing water observed however no water table or saturation within 24", point taken after							
recent rainfall.							
recentiannan.							

**VEGETATION (Five Strata)** – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft r	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1.	70 00.0.	орос.сс.	0.0	Number of Dominant Species
2.				That Are OBL, FACW, or FAC: 2 (A)
3.				Total Number of Dominant
4.				Species Across All Strata: 2 (B)
5. 6.				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)
<del></del>	=	Total Cover	<del></del>	Prevalence Index worksheet:
50% of total cover:	20%	of total cover:		Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 30 ft r )				OBL species <u>0</u> x 1 = <u>0</u>
1				FACW species <u>0</u> x 2 = <u>0</u>
2				FAC species 4 x 3 = 12
3.				FACU species 0 x 4 = 0
4.				UPL species 0 x 5 = 0
5.				Column Totals: 4 (A) 12 (B)
6.				Prevalence Index = B/A = 3.00
		Total Cover		Hydrophytic Vegetation Indicators:
50% of total cover:		of total cover:		1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30 ft r )				✓ 2 - Dominance Test is >50%
				3 - Prevalence Index is ≤3.0¹
2.				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.				1 Tobiemano Trydrophyno vogotanom (Explain)
4.				
				1.
5.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be
6.		T-1-L Cayor		present, unless disturbed or problematic.
500/ / / /		Total Cover		Definitions of Five Vegetation Strata:
50% of total cover:	20%	of total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 30 ft r )	_			approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
1. Acer rubrum	2		FAC	(7.6 only of larger in diameter at broadt neight (2211).
2. Ilex opaca	2		FAC	Sapling – Woody plants, excluding woody vines,
3.				approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
4				than 3 in. (7.0 cm) DBH.
5				<b>Shrub -</b> Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
7.				Herb – All herbaceous (non-woody) plants, including
8.				herbaceous vines, regardless of size, and woody
9.				plants, except woody vines, less than approximately 3
10.				ft (1 m) in height.
11.				Woody Vine - All woody vines, regardless of height.
	4	Total Cover		
50% of total cover: 2.00		of total cover:	0.80	
Woody Vine Stratum (Plot size: 30 ft r )				
1				
2				
Ζ.				
3.				
3. 4.				
3.	<u> </u>	Total Cours		Hydrophytic
3. 4. 5.		=Total Cover		Vegetation
3. 4.	20%	=Total Cover of total cover:		

Sampling Point: DP-33

# **VEGETATION Continued (Five Strata)** – Use scientific names of plants. Sampling Point: DP-33

Tree Stratum		Absolute	Dominant Species?	Indicator	Definitions of Five Vegetation Strate:
7.		% Cover	Species?	Status	Definitions of Five Vegetation Strata:
					<b>Tree</b> – 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).
-					Oction Westerlands and discounted and
4.4					Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
					than 3 in. (7.6 cm) DBH.
12.			=Total Cover		Shrub - Woody Plants, excluding woody vines,
	50% of total cover:		of total cover:		approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum			or total bover.		
· =					<b>Herb</b> – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, <u>and</u> woody
_					plants, except woody vines, less than approximately 3
_					ft (1 m) in height.
40					Woody Vine – All woody vines, regardless of height.
			=Total Cover		
	50% of total cover:		of total cover:		
Shrub Stratum	30 ft r				
· ·					
_					
0					
4.0					
12.					
			=Total Cover		
	50% of total cover:	20%	of total cover:		
Herb Stratum					
12.					
14.					
4 =					
16.					
17.					
18					
19					
20					
21					
22					
		4	=Total Cover		
	50% of total cover: 2.00	20%	of total cover:	0.80	
Woody Vine Stratum					
6.					
7.					
8.					
9.					
10					
			=Total Cover		
	50% of total cover:	20%	of total cover:		
Remarks: (If observed, li	ist morphological adaptation	ns below.)			

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	Matrix		Redo	x Featur	es					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks		
0 - 3	10YR 4/1	100					Sandy Loam			
3 - 8	2.5Y 5/3	80	5YR 4/6	5	С		Silty Clay			
3 - 8			7.5YR 5/8	15	С		Silty Clay			
8 - 24	10YR 6/6	100					Silty Clay			
-										
-										
¹Type: C=Co	oncentration, D=Depl	etion, RN	M=Reduced Matrix, N	 ∕IS=Mas	ked Sand	d Grains	<sup>2</sup> Location: PL=I	Pore Lining, M=Matrix.		
	ndicators: (Applica							Problematic Hydric Soils <sup>3</sup> :		
Histosol			Thin Dark Su		-	S, T, U)	1 cm Muck	(A9) <b>(LRR O)</b>		
Histic Ep	ipedon (A2)		Barrier Islan	ds 1 cm	Muck (S	12)	2 cm Muck	2 cm Muck (A10) (LRR S)		
Black His	stic (A3)		(MLRA 15	3B, 153	D)		Coast Prair	ie Redox (A16)		
Hydrogei	n Sulfide (A4)		Loamy Muck	y Miner	al (F1) <b>(L</b>	RR O)	(outside	MLRA 150A)		
Stratified	Layers (A5)		Loamy Gley	ed Matri	x (F2)		Reduced V	ertic (F18)		
	Bodies (A6) (LRR P,	T, U)	Depleted Ma				(outside	(outside MLRA 150A, 150B)		
_	cky Mineral (A7) (LR	-	Redox Dark	Surface	(F6)		•	loodplain Soils (F19) (LRR P, T)		
	esence (A8) (LRR U)		Depleted Da					Bright Floodplain Soils (F20)		
1 cm Mu	ck (A9) (LRR P, T)		Redox Depre					(MLRA 153B)		
	Below Dark Surface	(A11)	Marl (F10) <b>(I</b>	RR U)	` ,		—— Red Parent Material (F21)			
•	rk Surface (A12)	, ,	Depleted Oc	-	1) <b>(MLR</b>	(151)	Very Shallow Dark Surface (F22)			
Coast Pr	airie Redox (A16) ( <b>M</b>	LRA 150				-	•	ide MLRA 138, 152A in FL, 154)		
	osulfide (A18)		Umbric Surfa	ace (F13	3) (LRR P	, T, U)	Other (Expl	ain in Remarks)		
	ucky Mineral (S1) (L	RR O, S)	Delta Ochric	(F17) <b>(</b>	MLRA 15	1)		ŕ		
-	leyed Matrix (S4)		Reduced Ve			-	50B) <sup>3</sup> Indicators	of hydrophytic vegetation and		
-	edox (S5)		Piedmont Flo	oodplain	Soils (F	19) <b>(MLF</b>		or representations and		
-	Matrix (S6)		Anomalous I							
	face (S7) (LRR P, S,	T, U)	(MLRA 14	-			,			
Polyvalue Below Surface (S8)  Very Shallow Dark Surface (F22)						wetland hydrology must be present,				
(LRR S, T, U) (MLRA 138, 152A in F					unless disturbed or problematic.					
Restrictive L	ayer (if observed):									
Type:										
Depth (in	nches):						Hydric Soil Present?	Yes No		
Remarks:										
Hydric s	oil indicators	not o	bserved.							



Photograph 62: View of uplands at Data Point 33. This area was recently subject to clearcutting.



Photograph 63: View of non-hydric soil profile at Data Point 33.

## WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

<b>EGETATION (Five Strata)</b> – Use scie	Absolute	Dominant	Indicator	Sampling Point: DP-34
ree Stratum (Plot size: 30 ft r	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
. (Flot size	70 00.0.	оролос.	Olalas	
				Number of Dominant Species
2.	_			That Are OBL, FACW, or FAC: 1 (A)
3	_			Total Number of Dominant
1				Species Across All Strata: 1 (B)
5.				Percent of Dominant Species
5.				That Are OBL, FACW, or FAC: 100.00 (A/B)
, <u> </u>		=Total Cover		Prevalence Index worksheet:
FOOY of total covers				
50% of total cover:		of total cover:		Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 30 ft r )				OBL species <u>40</u> x 1 = <u>40</u>
l				FACW species $5$ $x 2 = 10$
2.				FAC species 10 x 3 = 30
3.			_	FACU species $10$ $x 4 = 40$
1.				UPL species $0$ $x = 0$
5.				(-)
5				Prevalence Index = B/A = 1.84
	:	=Total Cover		Hydrophytic Vegetation Indicators:
50% of total cover:	20%	of total cover:	. <u></u> _	✓ 1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30 ft r )				✓ 2 - Dominance Test is >50%
1.				✓ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
2.				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3				
4				
5.	<del>_</del>	_	_	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be
6.	_			present, unless disturbed or problematic.
·	_	=Total Cover		Definitions of Five Vegetation Strata:
FOOY of total across				
50% of total cover:	20%	of total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 30 ft r )				approximately 20 ft (6 m) or more in height and 3 in.
1. Osmunda cinnamomea	40		OBL	(7.6 cm) or larger in diameter at breast height (DBH).
2. Acer rubrum	10		FAC	Sapling – Woody plants, excluding woody vines,
3. Liriodendron tulipifera	7		FACU	approximately 20 ft (6 m) or more in height and less
4. Osmunda regalis			FACW	than 3 in. (7.6 cm) DBH.
	_ <del>-</del>			, ,
5. Oxydendrum arboreum	3		FACU	Shrub - Woody Plants, excluding woody vines,
6				approximately 3 to 20 ft (1 to 6 m) in height.
7				Herb – All herbaceous (non-woody) plants, including
8.				herbaceous vines, regardless of size, and woody
0				plants, except woody vines, less than approximately 3
				ft (1 m) in height.
10				
11				Woody Vine – All woody vines, regardless of height.
	65 :	=Total Cover		
50% of total cover: 33	2.50 20%	of total cover:	13.00	
Woody Vine Stratum (Plot size: 30 ft r	)			
	,			
1.				
2				
3				
4.				
5.				
o				Hydrophytic
		=Total Cover		Vegetation
50% of total cover:		of total cover:		Present? Yes No

## **VEGETATION Continued (Five Strata)** – Use scientific names of plants. Sampling Point: DP-34

Tues Otrestone		Absolute	Dominant	Indicator	Definitions of Fire Variation Office
Tree Stratum		% Cover	Species?	Status	Definitions of Five Vegetation Strata:
0					<b>Tree</b> – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in.
9.					(7.6 cm) or larger in diameter at breast height (DBH).
10					Sapling – Woody plants, excluding woody vines,
					approximately 20 ft (6 m) or more in height and less
12.	_				than 3 in. (7.6 cm) DBH.
			Total Cover		Shrub - Woody Plants, excluding woody vines,
	50% of total cover:	20%	of total cover:		approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum					Herb – All herbaceous (non-woody) plants, including
7					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.
12.			Total Cayor		
	50% of total cover:		=Total Cover of total cover:		
Shrub Stratum	30 ft r		or total cover.		
Ω					
•			·		
12.					
		=	=Total Cover		
	50% of total cover:	20%	of total cover:		
Herb Stratum					
	_				
13.					
15 16.					
17.					
18.	_				
19.					
20.					
21.					
22.					
		65	=Total Cover		
	50% of total cover: 32.5	20%	of total cover:	13.00	
Woody Vine Stratum					
6.					
7	_				
8.					
9.					
10			-Total Cavar		
	50% of total cover:		=Total Cover of total cover:		
Remarks: (If observed li	st morphological adaptation		or total cover.		
rtemarks. (II Observed, II	or morphological adaptation	is Delow.)			

Profile Desc	ription: (Describe t	to the de	pth needed to docu	ıment tl	he indica	ator or c	onfirm the absence	of indicators.)			
Depth	Matrix		Redo	x Featur	res						
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture Remarks				
0 - 1	10YR 2/2	100					Mucky Loam/Clay				
1 - 4	10YR 3/2	100					Sandy Loam				
4 - 20	2.5Y 6/2	65	7.5YR 4/6	35	С	М	Sandy Clay				
20 - 24	10Y 5/1	85	7.5YR 4/6	15	С	М	Sandy Clay				
-											
<sup>1</sup> Type: C=Co	ncentration, D=Depl	etion, RM	1=Reduced Matrix, N	/IS=Mas	ked San	d Grains	<sup>2</sup> Location:	PL=Pore Lining, M=Matrix.			
Hydric Soil I	ndicators: (Applica	ble to all	LRRs, unless other	rwise n	oted.)		Indicators	for Problematic Hydric Soils <sup>3</sup> :			
Histosol	(A1)		Thin Dark Su	urface (S	9) <b>(LRR</b>	S, T, U)	1 cm M	luck (A9) (LRR O)			
Histic Ep	ipedon (A2)		Barrier Island	ds 1 cm	Muck (S	12)	2 cm M	luck (A10) <b>(LRR S)</b>			
Black His	stic (A3)		(MLRA 15	3B, 153	D)		Coast I	Prairie Redox (A16)			
Hydrogei	n Sulfide (A4)		Loamy Muck	y Miner	al (F1) <b>(L</b>	.RR O)	(outs	side MLRA 150A)			
Stratified	Layers (A5)		Loamy Gleye	ed Matri	x (F2)		Reduce	ed Vertic (F18)			
Organic I	Bodies (A6) (LRR P,	T, U)	✓ Depleted Ma	trix (F3)	)		(outs	side MLRA 150A, 150B)			
5 cm Mu	cky Mineral (A7) (LR	R P, T, U	Redox Dark	Surface	(F6)		Piedmo	ont Floodplain Soils (F19) (LRR P, T)			
Muck Pre	esence (A8) (LRR U)	)	Depleted Da	rk Surfa	ce (F7)		Anoma	llous Bright Floodplain Soils (F20)			
1 cm Mu	ck (A9) (LRR P, T)		Redox Depre	essions	(F8)		(MLR	RA 153B)			
Depleted	Below Dark Surface	e (A11)	Marl (F10) <b>(L</b>	.RR U)			—Red Pa	arent Material (F21)			
Thick Da	rk Surface (A12)		Depleted Oc	hric (F1	1) <b>(MLR</b>	A 151)	Very Shallow Dark Surface (F22)				
Coast Pr	airie Redox (A16) (M	ILRA 150	A) Iron-Mangan	ese Ma	sses (F1	2) <b>(LRR</b>	O, P, T) (d	(outside MLRA 138, 152A in FL, 154)			
Iron Mon	osulfide (A18)		Umbric Surfa	ace (F13	3) <b>(LRR F</b>	P, T, U)	Other (	Explain in Remarks)			
Sandy M	ucky Mineral (S1) (L	RR O, S)	Delta Ochric	(F17) <b>(</b> I	MLRA 15	51)					
Sandy G	leyed Matrix (S4)	-	Reduced Ve	rtic (F18	) (MLRA	150A, 1	50B) <sup>3</sup> Indica	tors of hydrophytic vegetation and			
-	edox (S5)		Piedmont Flo	oodplain	Soils (F	19) <b>(MLF</b>					
· ·	Matrix (S6)		Anomalous E	Bright Fl	oodplain	Soils (F2	20)				
	face (S7) <b>(LRR P, S</b>	, T, U)	(MLRA 14	9A, 153	C, 153D	·	,				
	e Below Surface (S8	-	Very Shallow				wetla	and hydrology must be present,			
(LRR S		,	(MLRA 13		`	,	unless disturbed or problematic.				
	.ayer (if observed):										
Type:											
Depth (in	ches):						Hydric Soil Prese	ent? Yes 🗸 No			
Remarks:											
Hydric s	oil indicator l	=3 obs	served								
	on maioator i	0 00.	oci vea.								



Photograph 64: View of wetlands at Data Point 34. This area was recently subject to clearcutting.



Photograph 65: View of hydric soil profile at Data Point 34.

## WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Franklin - Kistler Tract City/C	ounty: <b>Greensville County</b> Sampling Date: 2025-05-07
Applicant/Owner: Otterdam Technology Group, LLC	State: Virginia Sampling Point: DP-35
	ownship, Range:
	oncave, convex, none): Concave Slope (%): 6
Subregion (LRR or MLRA): P 133A Lat: 36.79496733	Long: -77.50948214 Datum: NAD 83
Soil Map Unit Name: 31A - Roanoke loam, 0 to 2 percent slopes, fr	
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes No (If no, explain in Remarks.)
Are Vegetation _ v _ , Soil , or Hydrology _ v _ 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	
Hydrophytic Vegetation Present? Yes ✓ No Is the	Commission Aven
<del></del>	Sampled Area a Wetland? Yes No ✔
Wetland Hydrology Present?	a Welland. 100
Remarks: Data point taken upslope of a forested swamp in the	ne eastern portion of the study area. Area
	•
appears to have recently been subject to clearcutt	ing. Conditions wetter than normal for this
time of year.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)  Aquatic Fauna (B13)  Mad Barasite (B45) (ABB U)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)  Marl Deposits (B15) (LRR U)  Hadrone 9 4/6 to Oder (A1)	Drainage Patterns (B10)
Saturation (A3)  Hydrogen Sulfide Odor (C1)	Moss Trim Lines (B16)
Water Marks (B1)  Oxidized Rhizospheres on Livin	
Sediment Deposits (B2)  Presence of Reduced Iron (C4)	
Drift Deposits (B3) Recent Iron Reduction in Tilled	
Algal Mat or Crust (B4)  Thin Muck Surface (C7)	Geomorphic Position (D2)
Iron Deposits (B5) Other (Explain in Remarks)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)
Water-Stained Leaves (B9)	Sphagnum Moss (D8) (LRR T, U)
Field Observations:	
Field Observations:	
Surface Water Present? Yes No Depth (inches):	_
Surface Water Present? Yes No Depth (inches):  Water Table Present? Yes No Depth (inches):	_
Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes No
Surface Water Present? Yes No Depth (inches):  Water Table Present? Yes No Depth (inches):  Saturation Present? Yes No Depth (inches):  (includes capillary fringe)	
Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches):	
Surface Water Present? Yes No Depth (inches):  Water Table Present? Yes No Depth (inches):  Saturation Present? Yes No Depth (inches):  (includes capillary fringe)	
Surface Water Present? Yes No Depth (inches):  Water Table Present? Yes No Depth (inches):  Saturation Present? Yes No Depth (inches):  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous	
Surface Water Present? Yes No Depth (inches):  Water Table Present? Yes No Depth (inches):  Saturation Present? Yes No Depth (inches):  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous  Remarks:	inspections), if available:
Surface Water Present? Yes No Depth (inches):  Water Table Present? Yes No Depth (inches):  Saturation Present? Yes No Depth (inches):  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous	inspections), if available:
Surface Water Present? Yes No Depth (inches):  Water Table Present? Yes No Depth (inches):  Saturation Present? Yes No Depth (inches):  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous  Remarks:	inspections), if available:
Surface Water Present? Yes No Depth (inches):  Water Table Present? Yes No Depth (inches):  Saturation Present? Yes No Depth (inches):  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous)  Remarks:  No wetland hydrology indicators observed at this part of the present of the pres	inspections), if available:
Surface Water Present? Yes No Depth (inches):  Water Table Present? Yes No Depth (inches):  Saturation Present? Yes No Depth (inches):  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous)  Remarks:  No wetland hydrology indicators observed at this part of the present of the pres	inspections), if available:
Surface Water Present? Yes No Depth (inches):  Water Table Present? Yes No Depth (inches):  Saturation Present? Yes No Depth (inches):  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous)  Remarks:  No wetland hydrology indicators observed at this part of the present of the pres	inspections), if available:
Surface Water Present? Yes No Depth (inches):  Water Table Present? Yes No Depth (inches):  Saturation Present? Yes No Depth (inches):  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous)  Remarks:  No wetland hydrology indicators observed at this part of the present of the pres	inspections), if available:
Surface Water Present? Yes No Depth (inches):  Water Table Present? Yes No Depth (inches):  Saturation Present? Yes No Depth (inches):  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous)  Remarks:  No wetland hydrology indicators observed at this part of the present of the pres	inspections), if available:

VEGETATION (Four Strata) – Use scien	tific names	of plants.		Sampling Point: DP-35
<u>Tree Stratum</u> (Plot size: 30 ft r )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Ilex opaca	20	<u> </u>	FAC	Number of Dominant Species
Liriodendron tulipifera	15	<u> </u>	FACU	That Are OBL, FACW, or FAC: 6 (A)
3. Acer rubrum	8		FAC	Total Number of Dominant
4. Fraxinus pennsylvanica	5		FACW	Species Across All Strata: 7 (B)
5. Oxydendrum arboreum	5		FACU	
6.				Percent of Dominant Species That Are OBL, FACW, or FAC: 85.71 (A/B)
7.				Prevalence Index worksheet:
8.				Total % Cover of: Multiply by:
o	53	=Total Cover		OBL species 5
50% of total cover: 26.		of total cover	10.60	FACW species 43
Sapling/Shrub Stratum (Plot size: 30 ft r	1 2070	or total bovol		FAC species 78
	_/ 			FACU species 30
	10		FAC FAC	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
	8		FAC	
3. Magnolia virginiana	5		FACW	(F)
4. Quercus alba	3		<u>FACU</u>	Prevalence Index = B/A = 2.85
5.				Hydrophytic Vegetation Indicators:
6	<u> </u>			1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
8	40			3 - Prevalence Index is ≤3.0 <sup>1</sup>
		=Total Cover		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
50% of total cover: 21.	50 20%	of total cover	8.60	
Herb Stratum (Plot size: 30 ft r )				
Clethra alnifolia	30	<u> </u>	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be
2. Athyrium asplenioides	10		FAC	present, unless disturbed or problematic.
3. Smilax rotundifolia	10		FAC	Definitions of Four Vegetation Strata:
4. Medeola virginiana	5		FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5. Woodwardia areolata	5		OBL	more in diameter at breast height (DBH), regardless of
6.				height.
7.				
8.				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
9.				than 3 in. DBH and greater than 3.20 it (1 iii) tail.
10.	·			
11.				Herb – All herbaceous (non-woody) plants, regardless
12.				of size, and woody plants less than 3.28 ft tall.
	60	=Total Cover		Woody Vine – All woody vines greater than 3.28 ft in
50% of total cover: 30		of total cover	12.00	height.
	2070	or total cover		
Woody Vine Stratum (Plot size: 30 ft r )				
1				
2	· ——			
3.				
4				
5				Hydrophytic
	<u>=To</u>	tal Cover 20%		Vegetation
50% of total cover:		of total cover	:	Present? Yes No
Remarks: (If observed, list morphological adaptati	ons below.)			•
rtemants. (II observed, not morphological adaptati	one below.)			
Hydrophytic vegetation observe	ed.			
<del>-</del>				

<b>VEGETATION Continued (Four Strata)</b> -	<ul> <li>Use scie</li> </ul>	ntific names	of plants.	Sampling Point:
	Absolute	Dominant	Indicator	
Tree Stratum	% Cover	Species?	Status	Definitions of Four Vegetation Strata:
9.				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
				more in diameter at breast height (DBH), regardless of
				height.
11				
12				One line (Obsert - Was downloads as about a sector for a days
13.				Sapling/Shrub – Woody plants, excluding vines, less
14				than 3 in. DBH and greater than 3.28 ft (1 m) tall.
14.				
15				Herb – All herbaceous (non-woody) plants, regardless
16				of size, and woody plants less than 3.28 ft tall.
		=Total Cover		
50% of total cover: 26.5	0 20%	of total cover:	10.60	Woody Vine – All woody vines greater than 3.28 ft in
		0. 1010. 0010.		height.
Sapling/Shrub Stratum				
9				
10				
11.				
12.				
13.				
14				
15				
16.				
		=Total Cover		
04.50			0.60	
50% of total cover: 21.50	20%	of total cover:	8.60	
Herb Stratum				
13				
14				
14.			-	
15				
16				
17				
18.				
19.	-		-	
20				
21				
22.				
23.				
24				
		=Total Cover		
50% of total cover: 30.0	0 20%	of total cover:	12.00	
Woody Vine Stratum				
6				
7				
8.				
9.				
10.				
-		=Total Cover		
50% of total cover:	20%	of total cover:		
Remarks: (If observed, list morphological adaptation	ns below.)			
. , ,	,			
Hydrophytic vegetation observe	d.			

Profile Desci	ription: (Describe t	to the dept	h needed to docu	ıment t	he indica	tor or c	confirm the absence of indicators.)				
Depth	Matrix		Redo	x Featur	es						
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture Remarks				
0 - 12	10YR 3/1	100					Loamy Sand				
12 - 15	2.5Y 6/1	60					Sandy Loam				
12 - 15	2.5Y 4/2	40					Sandy Loam				
15 - 18	2.5Y 6/1	100					Sand				
							<u> </u>				
-			_				· <del></del>				
¹Type: C=Co	ncentration, D=Depl	etion, RM=I	Reduced Matrix, N	/IS=Mas	ked San	d Grains	s. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.				
Hydric Soil II	ndicators: (Applica	ble to all L	RRs, unless othe	rwise r	oted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :				
Histosol (	(A1)		Thin Dark Su	ırface (S	9) <b>(LRR</b>	S, T, U)	1)1 cm Muck (A9) (LRR O)				
Histic Epi	pedon (A2)		Barrier Island	ds 1 cm	Muck (S	12)	2 cm Muck (A10) (LRR S)				
Black His	tic (A3)		(MLRA 15	3B, 153	(D)		—— Coast Prairie Redox (A16)				
Hydroger	Sulfide (A4)		Loamy Muck	y Miner	al (F1) <b>(L</b>	RR O)	(outside MLRA 150A)				
	Layers (A5)		Loamy Gleye	ed Matri	x (F2)	•	Reduced Vertic (F18)				
	Bodies (A6) (LRR P,	T. U)	Depleted Ma		` '		(outside MLRA 150A, 150B)				
	cky Mineral (A7) <b>(LR</b>		Redox Dark	` '			Piedmont Floodplain Soils (F19) (LRR P, T)				
	esence (A8) <b>(LRR U)</b>		Depleted Da		` '		Anomalous Bright Floodplain Soils (F20)				
	ck (A9) (LRR P, T)	•	Redox Depre		` '		(MLRA 153B)				
		(//11)			(10)						
-	Below Dark Surface	(A11)	Marl (F10) <b>(L</b>	-	4) <b>(MI</b> D.	154	— Red Parent Material (F21)				
	rk Surface (A12)		Depleted Oc			-	Very Shallow Dark Surface (F22)				
	airie Redox (A16) (M	ILRA 150A)									
	osulfide (A18)		Umbric Surfa	,			Other (Explain in Remarks)				
-	ucky Mineral (S1) <b>(L</b>	RR O, S)	Delta Ochric	. , .		•					
Sandy GI	eyed Matrix (S4)		Reduced Ve	rtic (F18	B) (MLRA	150A, 1	150B) <sup>3</sup> Indicators of hydrophytic vegetation and				
Sandy Re	edox (S5)		Piedmont Flo	odplain	Soils (F	19) <b>(MLF</b>	.RA 149A)				
Stripped	Matrix (S6)		Anomalous E	Bright Fl	oodplain	Soils (F2	F20)				
Dark Surf	face (S7) <b>(LRR P, S</b> ,	, T, U)	(MLRA 14	9A, 153	C, 153D)	)					
Polyvalue	e Below Surface (S8)	)	Very Shallow	/ Dark S	Surface (F	22)	wetland hydrology must be present,				
(LRR S	S, T, U)		(MLRA 13	8, 152A	in FL, 1	54)	unless disturbed or problematic.				
	ayer (if observed):										
Type:	ah aa).						Hydric Soil Present? Yes ✔ No				
	ches):						Hydric Soil Present? Yes V No No				
Remarks:											
Hydric se	oil indicators	A11 an	d S7 observ	ved.							
,											



Photograph 66: View of uplands at Data Point 35. This area was recently subject to clearcutting.

## WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Franklin - Kistler	Tract	City/County: Greens	ville County	Sampling Date: 2025-05-07
Applicant/Owner: Otterdam Techn		, , <u></u>		Sampling Point: DP-36
Investigator(s): Lindsey Shortt, Julia		ection, Township, Range:		
Landform (hillside, terrace, etc.): Toeslo		relief (concave, convex,	none): Concave	Slope (%): 2
Subregion (LRR or MLRA): P 133A			77.50948103	Datum: NAD 83
Soil Map Unit Name: 31A - Roanoke Io				
Are climatic / hydrologic conditions on the sit	• • • • • • • • • • • • • • • • • • • •			kplain in Remarks.)
Are Vegetation, Soil, or Hydro			Circumstances" present?	
Are Vegetation, Soil, or Hydro	ologynaturally problem	natic? (If needed, ex	plain any answers in Rer	marks.)
SUMMARY OF FINDINGS – Attach	site map showing sa	mpling point locati	ons, transects, imp	portant features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes	Is the Sampled Area within a Wetland?	Yes	No
Remarks:	one in the outer of	lan of a forestor	d swamp in the	oastorn portion
Data point taken on a toesk				eastern portion
of the study area. Condition	ıs wetter than norı	mal for this time	e of year.	
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indicators (r	minimum of two required)
Primary Indicators (minimum of one is requi	red; check all that apply)		Surface Soil Crack	s (B6)
Surface Water (A1)	Aquatic Fauna (B13)		Sparsely Vegetated	d Concave Surface (B8)
High Water Table (A2)	Marl Deposits (B15) (LI	RR U)	Drainage Patterns	
Saturation (A3)	Hydrogen Sulfide Odor	•	Moss Trim Lines (E	
Water Marks (B1)	Oxidized Rhizospheres		Dry-Season Water	·
Sediment Deposits (B2)	Presence of Reduced I	= : :	Crayfish Burrows (	
Drift Deposits (B3)	Recent Iron Reduction			on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Thin Muck Surface (C7	` '	Geomorphic Position	• • • •
Iron Deposits (B5)	Other (Explain in Rema		Shallow Aquitard (I	
Inundation Visible on Aerial Imagery (B			FAC-Neutral Test (	· ·
✓ Water-Stained Leaves (B9)	• ,		Sphagnum Moss (I	,
Field Observations:			<u> </u>	
Surface Water Present? Yes	No Depth (inches)	١٠.		
Water Table Present? Yes	No Depth (inches)			
Saturation Present? Yes	No Depth (inches)	· <del></del>	Hydrology Present?	Yes ✔ No
(includes capillary fringe)	Bopai (monoo)	7. <u>0</u>   170 manu	ing an orogy is rocont.	
Describe Recorded Data (stream gauge, me	onitoring well, aerial photos, r	orevious inspections), if a	vailable:	
		/,/,		
Remarks:				
Dain accurred within 24 has	ire prior to data as	Mostion but du	o to standing w	ator and doon
Rain occurred within 24 hou	•	•	•	•
mud conditions in the centr	al areas of the swa	amp, WSSI belie	ves a high-wat	er table and soil
saturation would persist wit	hout recent rainfa	ıll.		
•				

VEGETATION (Four Strata) – Use scier	ntific names	of plants.		Sampling Point: DP-36
	Absolute	Dominant	Indicator	
Tree Stratum (Plot size: 30 ft r	% Cover	Species?	Status	Dominance Test worksheet:
1. <u>Ilex opaca</u>			FAC	Number of Dominant Species
2. Acer rubrum	15		FAC	That Are OBL, FACW, or FAC: 8 (A)
Liriodendron tulipifera	15		FACU	Total Number of Dominant
4. Fraxinus pennsylvanica	10		FACW	Species Across All Strata: 9 (B)
5. Magnolia virginiana	5		FACW	Percent of Dominant Species
6.	_			That Are OBL, FACW, or FAC: 88.88 (A/B)
7				Prevalence Index worksheet:
8.				Total % Cover of: Multiply by:
	65	=Total Cover		OBL species <u>28</u> x 1 = <u>28</u>
50% of total cover: 32	2.50 20%	of total cover:	13.00	FACW species <u>40</u> x 2 = <u>80</u>
Sapling/Shrub Stratum (Plot size: 30 ft r	)			FAC species 96 x 3 = 288
Carpinus caroliniana	 15	~	FAC	FACU species $15$ $x 4 = 60$
2. Ilex opaca	8		FAC	UPL species $0$ $x = 0$
Acer rubrum	5		FAC	Column Totals: 179 (A) 456 (B)
Magnolia virginiana	5		FACW	Prevalence Index = B/A = 2.54
5.	<u> </u>		IAOW	Hydrophytic Vegetation Indicators:
6.				1 - Rapid Test for Hydrophytic Vegetation
7.				✓ 2 - Dominance Test is >50%
8.		-		✓ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
o	33	=Total Cover		<del></del>
500/ - (1-1-1-1 16			6.60	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
50% of total cover: 16	20%	of total cover:	0.00	
Herb Stratum (Plot size: 30 ft r )			5.4.0V.4	
Clethra alnifolia	20		FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be
2. Athyrium asplenioides	<u>15</u>		FAC	present, unless disturbed or problematic.
3. Woodwardia areolata	<u>15</u>		OBL	Definitions of Four Vegetation Strata:
4. Saururus cernuus	10		OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5. Carex blanda	5	-	FAC	more in diameter at breast height (DBH), regardless of
6. Smilax rotundifolia	5		FAC	height.
7. Campsis radicans	3		FAC	Continue (Charub - Was de plants avalentina vinas lass
8. Peltandra virginica	3		OBL	Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
9.				than 3 m. DBH and greater than 3.20 ft (1 m) tail.
10.	_			
11.	_			Herb – All herbaceous (non-woody) plants, regardless
12.				of size, and woody plants less than 3.28 ft tall.
·		=Total Cover		Woody Vine – All woody vines greater than 3.28 ft in
50% of total cover: 38		of total cover:	15.20	height.
	2070	or total cover.		
Woody Vine Stratum (Plot size: 30 ft r  1. Toxicodendron radicans	) 5		EAC	
-			FAC	
2.				
3.				
4.				
5				Hydrophytic
	5 =To	tal Cover 20%		Vegetation
50% of total cover: 2.	50	of total cover:	1.00	Present? Yes V No No
Remarks: (If observed, list morphological adapta	tions below )			<u> </u>
remarks. (II observed, list morphological adapta	uoris below.)			
Hydrophytic vegetation observ	ed.			
,				

<b>VEGETATION Continued (Four Strata)</b> -	- Use scie	ntific names	of plants.	Sampling Point:
	Absolute	Dominant	Indicator	
Tree Stratum	% Cover	Species?	Status	Definitions of Four Vegetation Strata:
9.				
				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
10.				height.
11				neight.
12				
				Sapling/Shrub – Woody plants, excluding vines, less
13.				than 3 in. DBH and greater than 3.28 ft (1 m) tall.
14				
15				Harb All barbassaya (non woody) planta regardless
16				Herb – All herbaceous (non-woody) plants, regardless
		=Total Cover		of size, and woody plants less than 3.28 ft tall.
700/ /			12.00	
50% of total cover: 32.50	20%	of total cover:	13.00	Woody Vine – All woody vines greater than 3.28 ft in
Sapling/Shrub Stratum				height.
9				
10				
10.				
11				
12				
13.				
14.				
15				
16				
		=Total Cover		
50% of total cover: 16.50		of total cover:	6.60	
	20 /0	or total cover.		
Herb Stratum				
13				
14.				
			<u> </u>	
15				
16				
17				
18.				
19.				
20				
21.				
22				
23.				
24				
	76	=Total Cover		
50% of total cover: 38.00	0 20%	of total cover:	15.20	
Woody Vine Stratum				
6				
7				
8.		·		
9.				
10.				
	5	=Total Cover		
50% of total cover: 2.50	20%	of total cover:	1.00	
Remarks: (If observed, list morphological adaptation	ns below.)			
I badaa abada	-1			
Hydrophytic vegetation observed	a.			

Profile Desc	cription: (Describe	to the de	pth needed to docu	ıment t	he indica	ator or c	onfirm th	ne absence o	of indica	itors.)		
Depth	Matrix											
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Te	exture		Re	marks	<u> </u>
0 - 18	10YR 4/1	95	7.5YR 4/3	5	С	М	Sandy	Loam				
		·			· <u></u>							_
-												
_												
									,			
-												
<sup>1</sup> Type: C=C	oncentration, D=Dep	letion, RM	======================================	1S=Mas	sked San	d Grains		<sup>2</sup> Location: F	PL=Pore	Lining, M:	=Matr	ix.
	Indicators: (Applica							Indicators				
Histosol	(A1)		Thin Dark Su	ırface (	S9) <b>(LRR</b>	S, T, U)	)	1 cm M	uck (A9)	(LRR O)		
Histic Ep	oipedon (A2)		Barrier Island	ds 1 cm	Muck (S	12)		2 cm M	uck (A10	) (LRR S)	1	
Black Hi	stic (A3)		(MLRA 15	3B, 153	3D)			Coast F	Prairie Re	edox (A16)	)	
Hydroge	n Sulfide (A4)		Loamy Muck	y Miner	ral (F1) <b>(L</b>	RR O)		(outs	ide MLR	A 150A)		
	d Layers (A5)		Loamy Gleye	ed Matri	ix (F2)				d Vertic			
•	Bodies (A6) (LRR P,		✓ Depleted Ma							A 150A, 1		
	icky Mineral (A7) (LR											(LRR P, T)
	esence (A8) (LRR U)	)	Depleted Da						-	ht Floodpl	ain So	oils (F20)
	Ick (A9) (LRR P, T)	. (Δ11)	Redox Depre		(F8)			-	A 153B)			
-	d Below Dark Surface ark Surface (A12)	e (A11)	Marl (F10) <b>(L</b> Depleted Oc	-	1) /MI D	\ 151\		Red Pa		` '		2)
	rairie Redox (A16) ( <b>N</b>	N RA 150				-	O P T)	-				4 in FL, 154)
	nosulfide (A18)	ILIXA 130	Umbric Surfa		•	, .	0,1,1)	✓ Other (E				4 III 1 E, 10 <del>4</del> )
	lucky Mineral (S1) <b>(L</b>	RR O. S)						V Outer (E	_xpiaiii ii	Tromanc	,	
-	Gleyed Matrix (S4)	0, 0,	Reduced Ve				150B)	<sup>3</sup> Indicat	ors of hy	drophytic	veget	ation and
-	tedox (S5)		Piedmont Flo	•			•		0.0 0,	aropriyao	rogot	ation and
-	Matrix (S6)		Anomalous E									
Dark Su	rface (S7) (LRR P, S	, T, U)	(MLRA 14	9A, 153	3C, 153D)	)						
	e Below Surface (S8	)	Very Shallow	Dark S	Surface (F	<sup>-</sup> 22)		wetla	nd hydro	ology must	t be p	resent,
(LRR	S, T, U)		(MLRA 13	8, 152A	in FL, 1	54)	unless disturbed or problematic.					
Restrictive	Layer (if observed):											
Type:												
Depth (ii	nches):						Hydri	ic Soil Prese	nt?	Yes_	_	No
Remarks:												
Hydric s	oil indicator l	F3 obs	served.									
,												



Photograph 67: View of forested wetlands at Data Point 36.

## WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Frank	in - Kistler T	ract		City/County	:Greens،	ville County	Sampling Date:	2025-05-07
Applicant/Owner: Otter			up, LLC			*	nia Sampling Point:	
Investigator(s): Nikolai Karlov,	Jackson Livingstone,	Jillian Burgan, Ky	le Zinn, WSSI Se	ction, Townsl	hip, Range:			
Landform (hillside, terrace, e	tc.): Swale		Local	relief (conca	ve, convex, i	none): Concave	Slope (%):	4
Subregion (LRR or MLRA):	P 133A	 Lat: <b>36</b>	6.7966954	7	Long: -	77.51646172	Datum:	NAD 83
Soil Map Unit Name: 10B3								
Are climatic / hydrologic con-	ditions on the site	typical for this	s time of year?	,	Yes	No_ 🗸 (If no	, explain in Remark	s.)
Are Vegetation, Soil	, or Hydrol	ogy <u> </u>	nificantly distu	rbed? Ar	e "Normal C	ircumstances" prese	nt? Yes	No 🗸
Are Vegetation, Soil	, or Hydrol	ogynat	turally problem	atic? (If	needed, exp	olain any answers in	Remarks.)	
SUMMARY OF FINDIN	IGS – Attach	site map s	howing sar	mpling po	int location	ons, transects, i	important featu	res, etc.
Hydrophytic Vegetation Pre	sent?		lo	Is the Sam	pled Area			
Hydric Soil Present?		Yes N	10	within a W	-	Yes	No 🗸	
Wetland Hydrology Present	.?		lo					
Remarks: Data point taken i	n a depres	sional sv	vale drain	ing into	adjacer	nt stream/sw	amp system	•
Nonhydric soils a	•			•	•			
large-scale remov	val of exist	ing veget	tation, thi	is is not	conside	ered a Norma	I Condition.	
Conditions wetter	r than norm	nal for thi	is time of	year.				
HYDROLOGY								
Wetland Hydrology Indica	itors:					Secondary Indicator	rs (minimum of two	required)
Primary Indicators (minimus	m of one is requir	ed; check all t	hat apply)			Surface Soil Cra	acks (B6)	
Surface Water (A1)		Aquatic F	Fauna (B13)			Sparsely Vegeta	ated Concave Surfa	ce (B8)
High Water Table (A2)		Marl Dep	osits (B15) <b>(LF</b>	RR U)		Drainage Patter	rns (B10)	
Saturation (A3)		Hydroger	n Sulfide Odor	(C1)		Moss Trim Line	s (B16)	
Water Marks (B1)		Oxidized	Rhizospheres	on Living Ro	ots (C3)	Dry-Season Wa	ater Table (C2)	
Sediment Deposits (B2	)		e of Reduced Ir	_		Crayfish Burrow		
Drift Deposits (B3)	,		ron Reduction i		(C6)		ole on Aerial Imagery	v (C9)
Algal Mat or Crust (B4)			ck Surface (C7)		,	Geomorphic Po		, , ,
Iron Deposits (B5)			xplain in Rema			Shallow Aquitar		
Inundation Visible on A	erial Imagery (B7		•	,		FAC-Neutral Te		
Water-Stained Leaves	• • •	•				Sphagnum Mos	ss (D8) (LRR T, U)	
Field Observations:						<del></del>		
Surface Water Present?	Yes 🗸	No	Depth (inches):	: 0				
Water Table Present?	Yes 🗸	No [	Depth (inches):	: 0				
Saturation Present?	Yes 🗸	No [	Depth (inches):	: 5	Wetland I	Hydrology Present?	Yes 🗸	No
(includes capillary fringe)								
Describe Recorded Data (s	tream gauge, mo	nitoring well, a	aerial photos, p	revious inspe	ections), if av	vailable:		
Remarks:								
Wetland hydrolog	v indicator	rs observ	ed. Note	that dat	a point	was taken af	ter recent ra	infall
and localized com	-				•			
table. No evidenc	e of water	stained l	eaves or	reduced	l iron to	indicate prol	onged	
inundation/pondir							g. u.	
	19.							

**VEGETATION (Five Strata)** – Use scientific names of plants.

<b>EGETATION (Five Strata)</b> – Use scien				Sampling Point: DP-37
Tree Stratum (Plot size: 30 ft r )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
l 2.				Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
3. I.				Total Number of Dominant Species Across All Strata: 2 (B)
5.				· · ·
). 				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)
		=Total Cover		Prevalence Index worksheet:
50% of total cover:	20%	of total cover:		Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 30 ft r )				OBL species <u>0</u> x 1 = <u>0</u>
				FACW species 0
2.	_			FAC species 27 x 3 = 81
3.				FACU species $0   x4 = 0$
ı				UPL species $0$ $x = 0$
 j.				Column Totals: 27 (A) 81 (B)
). ).				Prevalence Index = B/A = 3.00
		=Total Cover		
				Hydrophytic Vegetation Indicators:
50% of total cover:	20%	of total cover:		1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30 ft r )				∠ 2 - Dominance Test is >50%
l				3 - Prevalence Index is ≤3.0 <sup>1</sup>
2.	_			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.				
1				
5.				10 10 10 10 10 10 10 10 10 10 10 10 10 1
				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be
5		<del></del>		present, unless disturbed or problematic.
		=Total Cover		Definitions of Five Vegetation Strata:
50% of total cover:	20%	of total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 30 ft r )				approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
Nyssa sylvatica	12		FAC	(7.6 cm) of larger in diameter at breast neight (DBH).
2. Smilax rotundifolia	8		FAC	Sapling – Woody plants, excluding woody vines,
Acer rubrum	5		FAC	approximately 20 ft (6 m) or more in height and less
Vitis rotundifolia	2		FAC	than 3 in. (7.6 cm) DBH.
5.				<b>Shrub -</b> Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
S		•		
<b>.</b>	_			Herb - All herbaceous (non-woody) plants, including
3.				herbaceous vines, regardless of size, <u>and</u> woody
)				plants, except woody vines, less than approximately 3 ft (1 m) in height.
0	_			
1.				<b>Woody Vine</b> – All woody vines, regardless of height.
	27	=Total Cover		
50% of total cover: 13	.50 20%	of total cover:	5.40	
Noody Vine Stratum (Plot size: 30 ft r				
2.	_			
3.				
1				
5				Hydrophytic
		=Total Cover		Hydrophytic
		= I Olai Covei		I Vegetation
50% of total cover:		of total cover		Vegetation Present? Yes ✓ No

## **VEGETATION Continued (Five Strata)** – Use scientific names of plants. Sampling Point: DP-37

Troc Stratum		Absolute	Dominant Species?	Indicator	Definitions of Five Vegetation Strate.
<u>Tree Stratum</u> 7.		% Cover	Species?	Status	Definitions of Five Vegetation Strata:
					<b>Tree</b> – 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).
					October Western Lands and a state of the sta
4.4					Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
					than 3 in. (7.6 cm) DBH.
12.			=Total Cover		Shrub - Woody Plants, excluding woody vines,
	50% of total cover:		of total cover:		approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum			or total dover.		
· -					<b>Herb</b> – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, <u>and</u> woody
_					plants, except woody vines, less than approximately 3
_					ft (1 m) in height.
40					Woody Vine – All woody vines, regardless of height.
			=Total Cover		
	50% of total cover:		of total cover:		
Shrub Stratum	30 ft r				
· ·					
_					
0					
40					
12.					
			=Total Cover		
	50% of total cover:	20%	of total cover:		
Herb Stratum					
12.					
14.					
4 =					
16.					
17.					
18					
19					
20					
21					
22					
		27 :	=Total Cover		
	50% of total cover: 13.50	0 20%	of total cover:	5.40	
Woody Vine Stratum					
6.	_				
7.					
8.					
9.					
10					
			=Total Cover		
	50% of total cover:	20%	of total cover:		
Remarks: (If observed, li	st morphological adaptation	s below.)			

Profile Desc	ription: (Describe t	o the de	pth needed to doci	ument t	he indica	tor or c	onfirm the absence	of indica	tors.)						
Depth	Matrix		-	x Featur					,						
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Rem	arks					
0 - 2	2.5Y 5/3	100					Sandy Loam								
2 - 6	2.5Y 6/2	80	7.5YR 5/8	20	С	М	Sandy Clay Loam 6/2+								
6 - 18	2.5Y 5/3	70	7.5YR 5/8	20	С	М	Sandy Clay Loam								
6 - 18	2.5Y 5/2	10					Sandy Clay Loam								
_															
<sup>1</sup> Type: C=Co	ncentration, D=Depl	etion, RM	1=Reduced Matrix, N	//S=Mas	ked San	d Grains	. <sup>2</sup> Location:	PL=Pore	Lining, M=N	∕latrix.					
Hydric Soil I	ndicators: (Applica	ble to all	LRRs, unless other	erwise r	oted.)		Indicators	for Prob	lematic Hyd	dric Soils³:					
Histosol (	(A1)		Thin Dark Su	urface (S	59) <b>(LRR</b>	S, T, U)	1 cm N	/luck (A9)	(LRR O)						
Histic Epi	ipedon (A2)		Barrier Islan	ds 1 cm	Muck (S	12)	2 cm N	/luck (A10	) (LRR S)						
Black His	tic (A3)		(MLRA 15	3B, 153	D)		Coast	Prairie Re	edox (A16)						
Hydroger	Sulfide (A4)		Loamy Muck	y Miner	al (F1) <b>(L</b>	RR O)	(out	side MLR	A 150A)						
Stratified	Layers (A5)		Loamy Gley	ed Matri	x (F2)		Reduc	ed Vertic	(F18)						
	Bodies (A6) (LRR P,	T, U)	Depleted Ma	atrix (F3)	) '		(out	side MLR	A 150A, 15	0B)					
	cky Mineral (A7) (LR			` '			•		•	F19) <b>(LRR P, T)</b>					
	esence (A8) (LRR U)		Depleted Da		` '					n Soils (F20)					
	ck (A9) <b>(LRR P, T)</b>		Redox Depre		` '			RA 153B)	•	(* ==)					
	Below Dark Surface	(Δ11)	Marl (F10) (I		(. 0)				erial (F21)						
	rk Surface (A12)	(/(11)	Depleted Oc	-	1) <b>(MI D</b> /	\ 151\			ark Surface	(E22)					
	` ,	II DA 150				-	•			` ′					
Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154) Iron Monosulfide (A18) Umbric Surface (F13) (LRR P, T, U) Other (Explain in Remarks)									132A III FL, 134)						
		DD 0 0\		•			Other (	(⊏xpiairi ii	i Remarks)						
-	ucky Mineral (S1) (L	KK (), (S)				•	50D) 2								
	eyed Matrix (S4)		Reduced Ve	,				itors of hy	drophytic ve	egetation and					
Sandy Re			Piedmont Flo				· ·								
	Matrix (S6)		Anomalous I	-			20)								
	face (S7) <b>(LRR P, S</b> ,		(MLRA 14	•											
Polyvalue (LRR S	e Below Surface (S8) S. T. U)	)	Very Shallov		`	,		•	ology must b	•					
			(MLRA 13	0, 13ZA	III FL, I	34)	T	ss distuit	ed or proble	emanc.					
Type:	ayer (if observed):														
Depth (in	ches):						Hydric Soil Pres	ent?	Yes	No 🗸					
Remarks:	,														
	oil indicators	not m	net. 2nd hori	zon f	rom to	op ha	s 6/2+ matrix	ζ.							
,															



Photograph 68: View of uplands at Data Point 37. This area was recently subject to clearcutting.



Photograph 69: View of non-hydric soil profile at Data Point 37.

## WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Frankin - Kistler Tr	ract	City/County: Greens	ille County	Sampling Date: 2025-05-07			
Applicant/Owner: Otterdam Techno	logy Group, LLC		State: Virginia	Sampling Point: DP-38			
Investigator(s): Nikolai Karlov, Jackson Livingstone, J		ction, Township, Range:					
Landform (hillside, terrace, etc.): Footslop		relief (concave, convex, i	none). Concave	Slope (%): 3			
Subregion (LRR or MLRA): P 133A			77.52097195	Datum: NAD 83			
Soil Map Unit Name: 10C3 - Craven clay							
Are climatic / hydrologic conditions on the site	typical for this time of year?	Yes	No (If no, ex	xplain in Remarks.)			
Are Vegetation, Soil, or Hydrold			ircumstances" present?				
Are Vegetation, Soil, or Hydrold	ogynaturally problemate	atic? (If needed, exp	olain any answers in Rer	narks.)			
SUMMARY OF FINDINGS – Attach	site map showing sar	mpling point location	ons, transects, imp	oortant features, etc.			
Hydrophytic Vegetation Present?	res No	Is the Sampled Area					
	res No V	within a Wetland?	Yes	No 🗸			
	∕es No ✓						
Remarks: Data point taken in upland hi	Ilslone hetween t	wo wetland find	iers Nonhydric	enile no			
hydrology, and the area appe	•	_	•	•			
		-		_			
scale removal of existing veg wetter than normal for this ti		ot considered a	Normal Conditi	on. Conditions			
HYDROLOGY	ille or year.						
			Secondary Indicators (n	minimum of two required)			
Wetland Hydrology Indicators:  Primary Indicators (minimum of one is require	ad: check all that apply)		Surface Soil Cracks				
Surface Water (A1)	Aquatic Fauna (B13)			d Concave Surface (B8)			
High Water Table (A2)	Marl Deposits (B15) (LR	DD III	Drainage Patterns				
Saturation (A3)	Hydrogen Sulfide Odor		Moss Trim Lines (B				
Water Marks (B1)	Oxidized Rhizospheres		Dry-Season Water				
Sediment Deposits (B2)	Presence of Reduced In	= : :	Crayfish Burrows (0				
Drift Deposits (B3)	Recent Iron Reduction is						
Algal Mat or Crust (B4)	Thin Muck Surface (C7)						
Iron Deposits (B5)	Other (Explain in Remai		Shallow Aquitard (E	` '			
Inundation Visible on Aerial Imagery (B7)		11(0)	FAC-Neutral Test (				
Water-Stained Leaves (B9)			Sphagnum Moss (E				
Field Observations:							
	No Pepth (inches):						
Water Table Present? Yes	No Pepth (inches):						
	No Popth (inches):		Hydrology Present?	Yes No ✔			
(includes capillary fringe)	Bopair (morroo).		i, are regy i recent i				
Describe Recorded Data (stream gauge, mon	nitoring well, aerial photos, p	revious inspections), if a	/ailable:				
, J	7 7	, ,					
Remarks:							
<b></b>							
Wetland hydrology indicators	s not observed.						

A1 1 1	<del></del>		<del></del>
Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
			Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
			Total Number of Dominant Species Across All Strata: 4 (B)
			Percent of Dominant Species That Are OBL, FACW, or FAC: 75.00 (A/B)
=	=Total Cover		Prevalence Index worksheet:
20%	of total cover:	·	Total % Cover of: Multiply by:
			OBL species <u>0</u> x 1 = <u>0</u>
2		FAC	FACW species 3 x 2 = 6
			FAC species 20 x 3 = 60
			FACU species $7$ $x 4 = 28$
			UPL species $0$ $x = 0$
			Column Totals: 30 (A) 94 (B)
			Prevalence Index = B/A = 3.13
- <del></del>	Total Cover		Hydrophytic Vegetation Indicators:
		0.40	
20%	of total cover:	0.40	1 - Rapid Test for Hydrophytic Vegetation
			2 - Dominance Test is >50%
_			3 - Prevalence Index is ≤3.0 <sup>1</sup>
			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
		<u> </u>	
			1. Program of traditional and continued by dealers mount by
			<sup>1</sup> Indicators of hydric soil and wetland hydrology must b present, unless disturbed or problematic.
	Total Cover		•
			Definitions of Five Vegetation Strata:
20%	of total cover:		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).
8		FAC	(7.0 cm) or larger in diameter at breast height (DDL).
5	<b>~</b>	FAC	Sapling – Woody plants, excluding woody vines,
5	<b>v</b>	FAC	approximately 20 ft (6 m) or more in height and less
5		FACU	than 3 in. (7.6 cm) DBH.
3			Shrub - Woody Plants, excluding woody vines,
			approximately 3 to 20 ft (1 to 6 m) in height.
		17.00	
			Herb – All herbaceous (non-woody) plants, including
			herbaceous vines, regardless of size, <u>and</u> woody plants, except woody vines, less than approximately 3
_			ft (1 m) in height.
_			<b>Woody Vine</b> – All woody vines, regardless of height.
28 =	=Total Cover		
.00 20%	of total cover:	5.60	
)			
_			
			I Hydrophytic
- <u> </u>	=Total Cover		Hydrophytic Vegetation
	2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	## Cover   Species?	## Cover   Species?   Status

## **VEGETATION Continued (Five Strata)** – Use scientific names of plants. Sampling Point: DP-38

Tree Stratum		Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Five Vegetation Strata:
7.					•
-					<b>Tree</b> – 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).
					Oction Westerlands and discounted and
4.4					Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less
					than 3 in. (7.6 cm) DBH.
12.			=Total Cover		Shrub - Woody Plants, excluding woody vines,
	50% of total cover:		of total cover:		approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum			or total cover.		
· -					<b>Herb</b> – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, <u>and</u> woody
0					plants, except woody vines, less than approximately 3
_					ft (1 m) in height.
40					Woody Vine – All woody vines, regardless of height.
40					
		2 :	=Total Cover		
	50% of total cover: 1.00		of total cover:	0.40	
Shrub Stratum	30 ft r				
_					
0					
4.0					
-			=Total Cover		
	50% of total cover:	20%	of total cover:		
Herb Stratum					
12.					
14.					
16.					
17.					
18.					
19					
20					
21					
22					
		28 :	=Total Cover		
	50% of total cover: 14.00	20%	of total cover:	5.60	
Woody Vine Stratum					
6.					
7.					
8.					
9.	_				
10	_				
			=Total Cover		
	50% of total cover:	20%	of total cover:		
Remarks: (If observed, li	st morphological adaptation	s below.)			

Depth   Matrix   Redox Features   Texture   Remarks
0 - 1         10YR 3/1         100         Sandy Loam           1 - 6         2.5Y 6/4         90         Sandy Loam           1 - 6         2.5Y 5/3         10         Sandy Loam           6 - 10         2.5Y 6/4         100         Sandy Loam           10 - 20         10YR 6/8         50         Silty Clay Loam           10 - 20         2.5Y 6/4         50         Silty Clay Loam           Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.         PL=Pore Lining, M=Matrix.           Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)         Indicators for Problematic Hydric Soils³:           Histosol (A1)         Thin Dark Surface (S9) (LRR S, T, U)         1 cm Muck (A9) (LRR O)
1 - 6       2.5Y 6/4       90       Sandy Loam         1 - 6       2.5Y 5/3       10       Sandy Loam         6 - 10       2.5Y 6/4       100       Sandy Loam         10 - 20       10YR 6/8       50       Silty Clay Loam         10 - 20       2.5Y 6/4       50       Silty Clay Loam     **Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.  **PL=Pore Lining, M=Matrix.**  **Indicators for Problematic Hydric Soils3:  **Indicators for Problematic Hydric Soil
1 - 6       2.5Y 5/3       10       Sandy Loam         6 - 10       2.5Y 6/4       100       Sandy Loam         10 - 20       10YR 6/8       50       Silty Clay Loam         10 - 20       2.5Y 6/4       50       Silty Clay Loam         -       -       Silty Clay Loam         -       -       Location: PL=Pore Lining, M=Matrix.         Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils³:         Histosol (A1)      Thin Dark Surface (S9) (LRR S, T, U)      1 cm Muck (A9) (LRR O)
6 - 10 2.5Y 6/4 100 Sandy Loam  10 - 20 10YR 6/8 50 Silty Clay Loam  10 - 20 2.5Y 6/4 50 Silty Clay Loam
10 - 20 10YR 6/8 50 Silty Clay Loam  10 - 20 2.5Y 6/4 50 Silty Clay Loam  Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.  Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O)
10 - 20 2.5Y 6/4 50 Silty Clay Loam  Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.  PL=Pore Lining, M=Matrix.  Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils <sup>3</sup> :  Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O)
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.  Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histosol (A1)  Thin Dark Surface (S9) (LRR S, T, U)  1 cm Muck (A9) (LRR O)
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  — Histosol (A1)  — Thin Dark Surface (S9) (LRR S, T, U)  — 1 cm Muck (A9) (LRR O)
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  — Histosol (A1)  — Thin Dark Surface (S9) (LRR S, T, U)  — 1 cm Muck (A9) (LRR O)
Histosol (A1) Thin Dark Surface (S9) (LRR S, T, U) 1 cm Muck (A9) (LRR O)
Histic Epipedon (A2) Barrier Islands 1 cm Muck (S12) 2 cm Muck (A10) (LRR S)
Black Histic (A3) (MLRA 153B, 153D)Coast Prairie Redox (A16)
Hydrogen Sulfide (A4)Loamy Mucky Mineral (F1) (LRR O) (outside MLRA 150A)
Stratified Layers (A5) Loamy Gleyed Matrix (F2) Reduced Vertic (F18)
Organic Bodies (A6) (LRR P, T, U) Depleted Matrix (F3) (outside MLRA 150A, 150B)
5 cm Mucky Mineral (A7) (LRR P, T, U) Redox Dark Surface (F6)Piedmont Floodplain Soils (F19) (LRR P, T)
Muck Presence (A8) (LRR U) Depleted Dark Surface (F7)Anomalous Bright Floodplain Soils (F20)
1 cm Muck (A9) (LRR P, T) Redox Depressions (F8) (MLRA 153B)
Depleted Below Dark Surface (A11)
Thick Dark Surface (A12) Depleted Ochric (F11) (MLRA 151)Very Shallow Dark Surface (F22)
Coast Prairie Redox (A16) (MLRA 150A) Iron-Manganese Masses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL, 154)
Iron Monosulfide (A18) Umbric Surface (F13) (LRR P, T, U) Other (Explain in Remarks)
Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151)
Sandy Gleyed Matrix (S4)  Reduced Vertic (F18) (MLRA 150A, 150B)  3Indicators of hydrophytic vegetation and
— Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 149A)
— Stripped Matrix (S6)  Anomalous Bright Floodplain Soils (F20)
— Dark Surface (S7) (LRR P, S, T, U) (MLRA 149A, 153C, 153D)
Polyvalue Below Surface (S8)Very Shallow Dark Surface (F22) wetland hydrology must be present, unless disturbed or problematic.
Restrictive Layer (if observed):
Type:
Depth (inches): Hydric Soil Present? Yes No
Remarks:
Hydric soil indicators not observed.
Try and don maidatore not especiated.



Photograph 70: View of uplands at Data Point 38. This area was recently subject to clearcutting.



Photograph 71: View of non-hydric soil profile at Data Point 38.

## WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Frankin - Kistler Tract	City/County: Greensville County Sampling Date: 2025-05-07
Applicant/Owner: Otterdam Technology Group, LLC	State: Virginia Sampling Point: DP-39
Investigator(s): Nikolai Karlov, Jackson Livingstone, Jillian Burgan, Kyle Zinn, WSSI Sec	ction, Township, Range:
Landform (hillside, terrace, etc.): Hillslope Local	relief (concave, convex, none): Linear Slope (%): 5
Subregion (LRR or MLRA): P 133A Lat: 36.7940590	
Soil Map Unit Name: 40A - Woodington fine sandy loam, 0	
Are climatic / hydrologic conditions on the site typical for this time of year?	
Are Vegetation, Soil, or Hydrology significantly distur	
Are Vegetation, Soil, or Hydrologynaturally problem SUMMARY OF FINDINGS – Attach site map showing sar	mpling point locations, transects, important features, etc.
,	
Hydrophytic Vegetation Present? Yes Vo. No.	Is the Sampled Area
Hydric Soil Present?  Wetland Hydrology Present?  Yes  No  No	within a Wetland? Yes V No No
Remarks:	
Data point taken on a hillslope tying into an ad	• •
appeared to have been very recently clear-cu	t. Based on the large-scale removal of existing
vegetation, this is not considered a Normal Co	ondition. Conditions wetter than normal for this
time of year.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) — Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Marl Deposits (B15) (LF	
Saturation (A3)Hydrogen Sulfide Odor	
Water Marks (B1) — Oxidized Rhizospheres	
Sediment Deposits (B2)  ——Presence of Reduced Ir	
Drift Deposits (B3) Recent Iron Reduction i	
Algal Mat or Crust (B4)  Thin Muck Surface (C7)  Other (Fig. 1)	
Iron Deposits (B5) Other (Explain in Rema	
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)
Water-Stained Leaves (B9)	Sphagnum Moss (D8) (LRR T, U)
Field Observations:	
Surface Water Present? Yes V No Depth (inches):	
Water Table Present? Yes V No Depth (inches):	
Saturation Present? Yes No _ Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes V No No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	revious inspections), if available:
3. 3 , ,	,,,
Remarks:	
Wetland hydrology indicators observed.	
Wettand frydrology maloatoro 55551 vod.	

**VEGETATION (Five Strata)** – Use scientific names of plants.

Tron Stratum (Plat size: 30 ft r	Absolute	Dominant	Indicator	Daminanas Test weeksheet
Tree Stratum (Plot size: 30 ft r )	% Cover	Species?	Status	Dominance Test worksheet:
<ol> <li>Liriodendron tulipifera</li> </ol>	2		FACU	Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)
3.				Total Number of Dominant
4.				Species Across All Strata: 7 (B)
5.				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 100.00 (A/B)
	2 =	Total Cover	<del> </del>	Prevalence Index worksheet:
50% of total cover: 1.00	20%	of total cover:	0.40	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 30 ft r )				OBL species 5 x 1 = 5
1. Ilex opaca	8	<b>✓</b>	FAC	FACW species 23 x 2 = 46
2. Liquidambar styraciflua	2	<u> </u>	FAC	FAC species 20 x 3 = 60
3.				FACU species 2 x 4 = 8
4.				UPL species $0   x 5 = 0$
5.				Column Totals: 50 (A) 119 (B)
6.				Prevalence Index = B/A = 2.38
	10 =	=Total Cover		Hydrophytic Vegetation Indicators:
50% of total cover: 5.00	20%	of total cover:	2.00	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30 ft r )				✓ 2 - Dominance Test is >50%
1.				✓ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
2.				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.				
4.				
5.				<sup>1</sup> Indicators of hydric coil and watland hydrology must be
6.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
		=Total Cover		Definitions of Five Vegetation Strata:
50% of total cover:	20%	of total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 30 ft r )				approximately 20 ft (6 m) or more in height and 3 in.
Clethra alnifolia	8		FACW	(7.6 cm) or larger in diameter at breast height (DBH).
2. Osmundastrum cinnamomeum	8	<b>~</b>	FACW	Sapling – Woody plants, excluding woody vines,
3. Arundinaria tecta	5		FACW	approximately 20 ft (6 m) or more in height and less
4. Smilax rotundifolia	5		FAC	than 3 in. (7.6 cm) DBH.
5. Woodwardia areolata	5		OBL	Shrub - Woody Plants, excluding woody vines,
6. Acer rubrum	3		FAC	approximately 3 to 20 ft (1 to 6 m) in height.
7. Athyrium asplenioides	2		FAC	Herb – All herbaceous (non-woody) plants, including
8. Magnolia virginiana	2		FACW	herbaceous vines, regardless of size, and woody
9.				plants, except woody vines, less than approximately 3
10				ft (1 m) in height.
11				Woody Vine – All woody vines, regardless of height.
	38 =	=Total Cover		
50% of total cover: 19.0	20%	of total cover:	7.60	
Woody Vine Stratum (Plot size: 30 ft r )				
1.				
2.				
2				
3.				Hudosahudia
3. 4.		=Total Cover		Hydrophytic Vegetation
3. 4.		=Total Cover		Hydrophytic Vegetation Present? Yes ✔ No
3. 4. 5.	20%			Vegetation

Sampling Point: DP-39

## **VEGETATION Continued (Five Strata)** – Use scientific names of plants. Sampling Point: DP-39

Tree Stratum		Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Five Vegetation Strata:
7.		70 00101	ороског.	Otatao	Tree – Woody plants, excluding woody vines,
					approximately 20 ft (6 m) or more in height and 3 in.
0					(7.6 cm) or larger in diameter at breast height (DBH).
					Sapling – Woody plants, excluding woody vines,
11.					approximately 20 ft (6 m) or more in height and less
12.					than 3 in. (7.6 cm) DBH.
-		2 :	=Total Cover		Shrub - Woody Plants, excluding woody vines,
	50% of total cover: 1.00	20%	of total cover:	0.40	approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum					<b>Herb</b> – All herbaceous (non-woody) plants, including
7.					herbaceous vines, regardless of size, <u>and</u> woody
					plants, except woody vines, less than approximately 3
_					ft (1 m) in height.
					Woody Vine – All woody vines, regardless of height.
40					
		10	=Total Cover		
	50% of total cover: <b>5.00</b>	20%	of total cover:	2.00	
Shrub Stratum	30 ft r	•			
7.					
_					
4.4					
		:	=Total Cover		
	50% of total cover:	20%	of total cover:		
Herb Stratum					
12					
13					
14					
15					
16					
17	_				
18	_				
19	_				
20					
21					
22					
			=Total Cover		
	50% of total cover: 19.0	0 20%	of total cover:	7.60	
Woody Vine Stratum					
6.					
7					
8					
9					
10					
			=Total Cover		
	50% of total cover:		of total cover:		
Remarks: (If observed, li	st morphological adaptation	s below.)			

Profile Desc	ription: (Describe	to the depth	needed to docu	ıment t	he indica	tor or c	onfirm th	e absence	of indica	itors.)		
Depth	Matrix		Redo	x Featu								
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Te	xture		Re	marks	3
0 - 6	2.5Y 3/1	100					Sandy					
6 - 16	2.5Y 7/2	100					Sand		hit co	mpacte	d lay	er at 16
_												
							-					
¹Type: C=Co	oncentration, D=Depl	letion, RM=F	Reduced Matrix, N	/IS=Mas	ked San	d Grains		<sup>2</sup> Location:	PL=Pore	Lining, M	=Matr	ix.
Hydric Soil I	ndicators: (Applica	ble to all LF	RRs, unless othe	rwise r	noted.)			Indicators	for Prob	lematic H	lydric	Soils <sup>3</sup> :
Histosol	(A1)	,	Thin Dark Su	urface (S	89) <b>(LRR</b>	S, T, U)	•	1 cm M	luck (A9)	(LRR O)		
Histic Ep	ipedon (A2)	•	Barrier Island	ds 1 cm	Muck (S	12)		2 cm M	luck (A10	) (LRR S	)	
Black His	stic (A3)		(MLRA 15	3B, 153	ID)			Coast F	Prairie R	edox (A16	)	
Hydroge	n Sulfide (A4)		Loamy Muck	y Miner	al (F1) <b>(L</b>	RR O)		(outs	ide MLR	A 150A)		
Stratified	Layers (A5)	·	Loamy Gleye	ed Matri	x (F2)		·	Reduce	ed Vertic	(F18)		
Organic	Bodies (A6) (LRR P,	T, U)	Depleted Ma	trix (F3)	)			(outs	ide MLR	A 150A, 1	150B)	
5 cm Mu	cky Mineral (A7) <b>(LR</b>	R P, T, U)	Redox Dark	Surface	(F6)		,	Piedmo	ont Flood	plain Soils	(F19	) (LRR P, T)
Muck Pre	esence (A8) (LRR U)	)	Depleted Da	rk Surfa	ice (F7)		,	Anoma	lous Brig	ht Floodp	lain S	oils (F20)
	ck (A9) (LRR P, T)		Redox Depre	essions	(F8)			(MLR	RA 153B)			
Depleted	Below Dark Surface	e (A11)	Marl (F10) <b>(L</b>	.RR U)			•	Red Pa	arent Mat	erial (F21)	)	
Thick Da	rk Surface (A12)		Depleted Oc	hric (F1	1) <b>(MLR</b>	151)		Very SI	hallow D	ark Surfac	e (F2	2)
Coast Pr	airie Redox (A16) (N	ILRA 150A)	Iron-Mangan	ese Ma	sses (F12	2) <b>(LRR</b>	O, P, T)	(0	outside l	/ILRA 138	3, 152	A in FL, 154)
Iron Mon	osulfide (A18)	•	Umbric Surfa			-	•	Other (	(Explain in Remarks)			
-	lucky Mineral (S1) <b>(L</b>	.RR O, S)	Delta Ochric									
-	leyed Matrix (S4)		Reduced Ve	•			•	<sup>3</sup> Indicat	tors of hy	drophytic	veget	ation and
Sandy R		,	Piedmont Flo				-					
	Matrix (S6)		Anomalous E	-		•	20)					
	face (S7) (LRR P, S	-	(MLRA 14		-							
	e Below Surface (S8 <b>S, T, U)</b>	,	Very Shallow (MLRA 13				wetland hydrology must be present, unless disturbed or problematic.					
	_ayer (if observed):		(2.07.10	0, 1027		,		ui ii o	oo alotan	700 01 P10	5101110	
Type:												
Depth (ir	nches):						Hydrid	Soil Prese	ent?	Yes	/	No
Remarks:	<u> </u>						1			\ <u></u>		
Hydric s	oil indicator	A11 obs	erved.									



Photograph 72: View of wetlands at Data Point 39. This area was recently subject to clearcutting.



Photograph 73: View of hydric soil profile at Data Point 39.

## WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Frankin - Kistler Ti	ract City	y/County: Greensville County	Sampling Date: 2025-05-08				
Applicant/Owner: Otterdam Techno	logy Group, LLC	State: Virç	ginia Sampling Point: DP-40				
Investigator(s): Nikolai Karlov, Jackson Livingstone, J	Jillian Burgan, Kyle Zinn, WSSI Section,						
Landform (hillside, terrace, etc.): Hillslope		f (concave, convex, none): Linear	Slope (%): <b>7</b>				
Subregion (LRR or MLRA): P 133A		Long: -77.51266067					
Soil Map Unit Name: 10B3 - Craven clay							
Are climatic / hydrologic conditions on the site	typical for this time of year?	Yes No (If	no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrold	ogysignificantly disturbed?	? Are "Normal Circumstances" pre	sent? Yes 🗸 No				
Are Vegetation, Soil, or Hydrold	ogynaturally problematic?	(If needed, explain any answers	in Remarks.)				
SUMMARY OF FINDINGS – Attach			s, important features, etc.				
Hydrophytic Vegetation Present?	Yes No Is th	he Sampled Area					
Hydric Soil Present?	Yes No with		No 🗸				
Wetland Hydrology Present?	Yes No with	_					
Remarks: Data point taken in upland hi		d-successional growth:	oresent following				
			Jiesent Tonowing				
previous tree clearing. Slope	drains down into au	ljacent swamp system.					
HYDROLOGY							
Wetland Hydrology Indicators:		Secondary Indica	ators (minimum of two required)				
Primary Indicators (minimum of one is require	ed; check all that apply)	Surface Soil Cracks (B6)					
Surface Water (A1)	Aquatic Fauna (B13)	Sparsely Veç	getated Concave Surface (B8)				
High Water Table (A2)  Marl Deposits (B15) (LRR U)  Drainage Patterns (B10)							
Saturation (A3)	Hydrogen Sulfide Odor (C1)  Moss Trim Lines (B16)						
Water Marks (B1)							
Sediment Deposits (B2)							
Drift Deposits (B3) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9)							
Algal Mat or Crust (B4)	Thin Muck Surface (C7)	Geomorphic	Position (D2)				
Iron Deposits (B5) Other (Explain in Remarks) Shallow Aquitard (D3)							
Inundation Visible on Aerial Imagery (B7)  FAC-Neutral Test (D5)							
Water-Stained Leaves (B9)		Sphagnum M	loss (D8) (LRR T, U)				
Field Observations:							
Surface Water Present? Yes	No Depth (inches):						
Water Table Present? Yes	No Depth (inches):	<del></del>					
Saturation Present? Yes	No Pepth (inches):	Wetland Hydrology Presei	nt? Yes No 🗸				
(includes capillary fringe)	<del></del>						
Describe Recorded Data (stream gauge, mor	nitoring well, aerial photos, previo	ous inspections), if available:					
Remarks:							
Wetland hydrology indicators	s not observed. No v	vater table or saturation	observed within 24				
		14(0) (40) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0					
inches from the ground surfa	ice.						

**VEGETATION (Five Strata)** – Use scientific names of plants.

<b>EGETATION (Five Strata)</b> – Use scien		or planto.		Sampling Point: DP-40			
Tree Stratum (Plot size: 30 ft r )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:			
 2.				Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)			
				Total Number of Dominant Species Across All Strata: 6 (B)			
·	_						
				Percent of Dominant Species That Are OBL, FACW, or FAC: 83.33 (A/B)			
		=Total Cover		Prevalence Index worksheet:			
50% of total cover:	20%	of total cover:		Total % Cover of: Multiply by:			
Sapling Stratum (Plot size: 30 ft r )				OBL species <u>0</u> x 1 = <u>0</u>			
Pinus taeda	60		FAC	FACW species $0   x 2 = 0$			
. Rhus glabra	10			FAC species $107$ $x 3 = 321$			
llex opaca	2		FAC	FACU species $15$ $x 4 = 60$			
				UPL species $0   x 5 = 0$			
·				Column Totals: 122 (A) 381 (B			
· i.				Prevalence Index = $B/A = 3.12$			
	72	Total O					
200		=Total Cover	14.40	Hydrophytic Vegetation Indicators:			
50% of total cover: 36	.00 20%	of total cover:	14.40	1 - Rapid Test for Hydrophytic Vegetation			
Shrub Stratum (Plot size: 30 ft r )				2 - Dominance Test is >50%			
Pinus taeda	15		FAC	3 - Prevalence Index is ≤3.0 <sup>1</sup>			
llex opaca	5		FAC	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)			
<b>.</b>							
i.							
 j.				1			
				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be			
S				present, unless disturbed or problematic.			
		=Total Cover		Definitions of Five Vegetation Strata:			
50% of total cover: 10.	00 20%	of total cover:	4.00	Tree – Woody plants, excluding woody vines,			
Herb Stratum (Plot size: 30 ft r )				approximately 20 ft (6 m) or more in height and 3 in.			
. Poa annua	15		FACU	(7.6 cm) or larger in diameter at breast height (DBH).			
Andropogon gerardii	12	~	FAC	Sapling – Woody plants, excluding woody vines,			
Rubus pensilvanicus	8		FAC	approximately 20 ft (6 m) or more in height and less			
. Ilex opaca	3		FAC	than 3 in. (7.6 cm) DBH.			
Aralia spinosa	2		FAC	<ul> <li>Shrub - Woody Plants, excluding woody vines,</li> </ul>			
·			170	approximately 3 to 20 ft (1 to 6 m) in height.			
i				approximately of to 20 H (1 to 0 H), in Height			
				Herb – All herbaceous (non-woody) plants, including			
				herbaceous vines, regardless of size, <u>and</u> woody			
				plants, except woody vines, less than approximately 3			
0.				ft (1 m) in height.			
				Woody Vine – All woody vines, regardless of height.			
	40	=Total Cover					
1.		=Total Cover	8.00				
1		=Total Cover of total cover	8.00				
1			8.00				
1			8.00				
1			8.00				
50% of total cover: 20  Voody Vine Stratum (Plot size: 30 ft r )			8.00				
50% of total cover: 20  Voody Vine Stratum (Plot size: 30 ft r )	.00 20%		8.00				
50% of total cover: 20  Voody Vine Stratum (Plot size: 30 ft r )  2. 2. 3.	.00 20%		8.00				
50% of total cover: 20  Voody Vine Stratum (Plot size: 30 ft r )  2.	.00 20%	of total cover:	8.00	Hydrophytic			
50% of total cover: 20  Voody Vine Stratum (Plot size: 30 ft r )	.00 20%			Hydrophytic Vegetation Present? Yes ✓ No			

# **VEGETATION Continued (Five Strata)** – Use scientific names of plants. Sampling Point: DP-40

Tree Stratum		Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Five Vegetation Strata:
<del></del>		76 COVE	Species:	Status	
0					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,
11.					approximately 20 ft (6 m) or more in height and less
12.					than 3 in. (7.6 cm) DBH.
		:	=Total Cover		Shrub - Woody Plants, excluding woody vines,
	50% of total cover:	20%	of total cover:		approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum					Herb – All herbaceous (non-woody) plants, including
7					herbaceous vines, regardless of size, and woody
0					plants, except woody vines, less than approximately 3 ft (1 m) in height.
	_				Woody Vine – All woody vines, regardless of height.
11					
12					
	500/ afterfall access 26.0		=Total Cover	14.40	
Charle Ctuations	50% of total cover: <b>36.0</b>	20%	of total cover:	14.40	
Shrub Stratum 7.	30 ft r				
0					
-					
		20 =	=Total Cover		
	50% of total cover: 10.0		of total cover:	4.00	
Herb Stratum					
12.					
14.					
15					
16					
17					
19					
	_				
	_				
22		40			
	500/ // / 00 0		=Total Cover	0.00	
Mander Vina Chroterna	50% of total cover: <b>20.0</b>	20%	of total cover:	8.00	
Woody Vine Stratum  6.					
7.					
Ω	_				
9.	_				
10.					
·			=Total Cover		
	50% of total cover:		of total cover:		
Remarks: (If observed I	ist morphological adaptation				L
, ,,	,	/			

Profile Desc	ription: (Describe t	to the depth	needed to docu	ıment t	he indica	ator or c	onfirm the abs	ence of indica	ators.)		
Depth	Matrix		Redox Features								
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Texture			
0 - 4	10YR 3/2	100					Sandy Loar	y Loam			
4 - 10	10YR 5/4	100					Sandy Loar	<u>n</u>			
10 - 20	2.5Y 6/4	100					Sandy Loam				
20 - 24	2.5Y 6/4	20					Sandy Clay L	oam_			
20 - 24	10YR 4/6	80					Sandy Clay L	oam_			
-											
¹Type: C=Co	ncentration, D=Depl	etion. RM=F	Reduced Matrix. N	/IS=Mas	ked San	d Grains	2Loca	tion: PL=Pore	Linina. M=N	Matrix.	
	ndicators: (Applica					<u> </u>		ators for Prok			
Histosol (			Thin Dark Su		-	S, T, U)		cm Muck (A9)	_		
Histic Epi	ipedon (A2)		Barrier Island	ds 1 cm	Muck (S	12)	2	cm Muck (A1	0) <b>(LRR S)</b>		
Black His	tic (A3)		(MLRA 15	3B, 153	D)			Coast Prairie R	edox (A16)		
Hydroger	Sulfide (A4)		Loamy Muck	y Miner	al (F1) <b>(L</b>	RR O)		(outside MLF	RA 150A)		
Stratified	Layers (A5)		Loamy Gleye	ed Matri	x (F2)		F	Reduced Vertic	(F18)		
Organic E	Bodies (A6) (LRR P,	T, U)	Depleted Ma	trix (F3)	)			(outside MLF	RA 150A, 15	0B)	
5 cm Mud	cky Mineral (A7) (LR	R P, T, U)	Redox Dark	Surface	(F6)		F	Piedmont Flood	Iplain Soils (	F19) <b>(LRR F</b>	P, T)
Muck Pre	esence (A8) (LRR U)	)	Depleted Da	rk Surfa	ice (F7)			Anomalous Bright Floodplain Soils (F20)			
	ck (A9) <b>(LRR P, T)</b>		Redox Depre	essions	(F8)			(MLRA 153B)			
Depleted	Below Dark Surface	e (A11)	Marl (F10) <b>(L</b>	.RR U)			F	—— Red Parent Material (F21)			
Thick Da	Thick Dark Surface (A12)Depleted Ochric (F11) (MLRA 151)				A 151)	<u> </u>	ery Shallow D	ark Surface	(F22)		
Coast Pra	Coast Prairie Redox (A16) (MLRA 150A)Iron-Manganese Masses (F12) (LRR			2) <b>(LRR</b>	O, P, T)	(outside l	MLRA 138, 1	152A in FL,	154)		
Iron Monosulfide (A18) Umbric Surface (F13) (LRR P, T, U)			P, T, U)		other (Explain i	n Remarks)					
Sandy Mucky Mineral (S1) (LRR O, S) Delta Ochric (F17) (MLRA 151)				•							
Sandy Gleyed Matrix (S4) Reduced Vertic (F18) <b>(MLRA 150A</b> ,			•	ndicators of hy	/drophytic ve	egetation and	b				
-	Sandy Redox (S5) Piedmont Floodplain Soils (F19) (ML			-							
	Matrix (S6)		Anomalous I	-			20)				
	face (S7) (LRR P, S,	•	(MLRA 14								
Polyvalue Below Surface (S8) (LRR S, T, U)			Very Shallow Dark Surface (F22) wetland hydrology must be (MLRA 138, 152A in FL, 154) unless disturbed or problem								
Restrictive L	ayer (if observed):		`		<u> </u>				<u> </u>		
Type:	,										
Depth (inches):					Hydric Soil	Present?	Yes	_ No <u></u> ✓	_		
Remarks:											
Hydric s	oil indicators	not ob	served.								



Photograph 74: View of uplands at Data Point 40.



Photograph 75: View of non-hydric soil profile at Data Point 40.

## WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

Project/Site: SRF Frankin - Kistler Tract City/County: Greensville County Sampling Date: 2025-05-08
Applicant/Owner: Otterdam Technology Group, LLC State: Virginia Sampling Point: DP-41
Investigator(s): Nikolai Karlov, Jackson Livingstone, Jillian Burgan, Kyle Zinn, WSSI Section, Township, Range:
Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2
Subregion (LRR or MLRA): P 133A Lat: 36.79251787 Long: -77.51309485 Datum: NAD 83
Soil Map Unit Name: 10B3 - Craven clay loam, 2 to 6 percent slopes, severely eroded NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year?  Yes  No  (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Is the Sampled Area
Hydric Soil Present?  Yes V No within a Wetland?  Yes V No
Wetland Hydrology Present? Yes V No No
Remarks: Data point taken in a broad depression adjoining a linear wetland system. This area displays
early to mid-successional growth following tree clearing. Conditions wetter than normal for
this time of year.
HYDROLOGY
Wetland Hydrology Indicators:  Secondary Indicators (minimum of two required)  Primary Indicators (minimum of one is required; check all that apply)  Surface Soil Cracks (R6)
Primary Indicators (minimum of one is required; check all that apply)  Surface Soil Cracks (B6)  Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)  Marl Deposits (B15) (LRR U)  Addater adria (B15)  Figure 3 parsety vegetated concave surface (B6)
✓ Saturation (A3)  Hydrogen Sulfide Odor (C1)  Moss Trim Lines (B16)
Water Marks (B1)  Oxidized Rhizospheres on Living Roots (C3)  Dry-Season Water Table (C2)
Sediment Deposits (B2)  Presence of Reduced Iron (C4)  Crayfish Burrows (C8)
Drift Deposits (B3)  Recent Iron Reduction in Tilled Soils (C6)  Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)  Thin Muck Surface (C7)  Geomorphic Position (D2)
Iron Deposits (B5)  Other (Explain in Remarks)  Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)  V FAC-Neutral Test (D5)
Water-Stained Leaves (B9)  Water-Stained Leaves (B9)  Sphagnum Moss (D8) (LRR T, U)
<del>-</del>
Field Observations:
Surface Water Present? Yes V No Depth (inches): 0
Water Table Present? Yes No Depth (inches): 10 No Depth (inches): 10 No
Saturation Present? Yes _v No Depth (inches): 8 Wetland Hydrology Present? Yes _v No No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Dodalbo Noorded Data (ottodin gaage, memoring no., denta, process,
Remarks:
Wetland hydrology indicators observed.

**VEGETATION (Five Strata)** – Use scientific names of plants.

<b>'EGETATION (Five Strata)</b> – Use scier	itilio ilaliioo t			Sampling Point: DP-41
Free Stratum (Plot size: 30 ft r )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
·				Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
				Total Number of Dominant Species Across All Strata: 4 (B)
				Percent of Dominant Species
i				That Are OBL, FACW, or FAC: 75.00 (A/B)
	=	=Total Cover		Prevalence Index worksheet:
50% of total cover:	20%	of total cover:		Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 30 ft r )				OBL species <u>1</u> x 1 = <u>1</u>
·	_			FACW species 47 x 2 = 94
·				FAC species 40 x 3 = 120
				FACU species 15 x 4 = 60
				UPL species 0 x 5 = 0
				Column Totals: 103 (A) 275 (B)
				Prevalence Index = B/A = 2.66
		=Total Cover		Hydrophytic Vegetation Indicators:
50% of total cover:	20%	of total cover:		1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30 ft r )				✓ 2 - Dominance Test is >50%
Pinus taeda	30	<b>V</b>	FAC	✓ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
Rhus glabra	5			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
llex opaca	<del>-</del> <del>5</del>		FAC	
	_		1710	
•				1
	_			<sup>1</sup> Indicators of hydric soil and wetland hydrology must be
j	40	Total Causer		present, unless disturbed or problematic.
700/ ()		=Total Cover	0.00	Definitions of Five Vegetation Strata:
50% of total cover: 20	<u>J.00                                   </u>	of total cover:	0.00	Tree – Woody plants, excluding woody vines,
lerb Stratum (Plot size: 30 ft r )				approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
Andropogon glomeratus	30		FACW	(1.0 only of larger in diameter at broadt height (BBH).
Eupatorium capillifolium	<u> 15</u>		FACU	Sapling – Woody plants, excluding woody vines,
Clethra alnifolia	<u>15</u>		FACW	approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
Pinus taeda	5		FAC	than 3 m. (7.6 cm) DBn.
Magnolia virginiana	2		FACW	Shrub - Woody Plants, excluding woody vines,
Typha latifolia	_ 1		OBL	approximately 3 to 20 ft (1 to 6 m) in height.
·				<b>Herb</b> – All herbaceous (non-woody) plants, including
				herbaceous vines, regardless of size, and woody
				plants, except woody vines, less than approximately 3
0.	_			ft (1 m) in height.
1.				Woody Vine – All woody vines, regardless of height.
	68	=Total Cover		
		of total cover:	13.60	
50% of total cover: 34	2070	or total cover.		
50% of total cover: 34 Voody Vine Stratum (Plot size: 30 ft r	)			
Voody Vine Stratum (Plot size: 30 ft r	)			
Voody Vine Stratum (Plot size: 30 ft r	) 			
Voody Vine Stratum (Plot size: 30 ft r		_		
Voody Vine Stratum (Plot size: 30 ft r	) 	<u> </u>		
Voody Vine Stratum (Plot size: 30 ft r	)  	<u></u>		
Voody Vine Stratum (Plot size: 30 ft r	) 			Hydrophytic
Voody Vine Stratum (Plot size: 30 ft r		=Total Cover		Hydrophytic Vegetation

# **VEGETATION Continued (Five Strata)** – Use scientific names of plants. Sampling Point: DP-41

Tree Stratum		Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Five Vegetation Strata:
7					Tree – Woody plants, excluding woody vines,
8. 9.					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,
11					approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
_	_		=Total Cover		Shrub - Woody Plants, excluding woody vines,
	50% of total cover:	20%	of total cover:		approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum					Herb – All herbaceous (non-woody) plants, including
					herbaceous vines, regardless of size, <u>and</u> woody plants, except woody vines, less than approximately 3
•					ft (1 m) in height.
					Woody Vine - All woody vines, regardless of height.
	_				
			=Total Cover		
Charle Ctuatura	50% of total cover:	20%	of total cover:		
Shrub Stratum 7	30 ft r				
0					
11					
12					
	50% of total cover: 20.0		=Total Cover of total cover:	8 00	
Herb Stratum	5070 of total cover	2070	or total cover.		
13.					
4.4					
<u> </u>					
16 17.					
18.					
19.					
20.					
21					
22.		68	T-1-1 0		
	50% of total cover: <b>34.0</b>		=Total Cover of total cover:	13 60	
Woody Vine Stratum	3070 of total cover. <u>34.0</u>	2070	or total cover.	10.00	
7					
8.					
10.			=Total Cover		
	50% of total cover:		of total cover:		
Remarks: (If observed, I	ist morphological adaptation				l

Profile Desc	ription: (Describe t	o the de	pth needed to docu	ument th	ne indic	ator or c	onfirm the a	absence of	indicators.)		
Depth	Matrix		Redo	x Featur							
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Textu	ıre	Remarks		
0 - 4	10YR 4/2	98	5YR 3/2	2	С		Silt Loam	Silt Loam			
4 - 8	10YR 4/1	100					Silt Loam	<u> </u>			
8 - 20	10YR 6/1	90	10YR 6/4	10	<u>C</u>	M	Sandy Lo	oam			
20 - 24	2.5Y 6/1	80	7.5YR 4/6	20	<u>C</u>	<u>M</u>	Sandy Cla	y Loam			
<sup>1</sup> Type: C=Co	ncentration, D=Depl	etion, RN	M=Reduced Matrix, N	/IS=Mas	ked San	d Grains.	. <sup>2</sup> Lo	ocation: Pl	L=Pore Lining, M=Matrix.		
-		ble to al	I LRRs, unless othe		-				or Problematic Hydric So	oils³:	
Histosol (			Thin Dark Su			-			ck (A9) <b>(LRR O)</b>		
	ipedon (A2)		Barrier Island			12)			ck (A10) <b>(LRR S)</b>		
Black His			(MLRA 15		-		_		airie Redox (A16)		
	Sulfide (A4)		Loamy Muck	-		.RR O)		•	de MLRA 150A)		
	Layers (A5)	<b>-</b>	Loamy Gleye				_	_	Vertic (F18)		
_	Bodies (A6) (LRR P,	-	<u>✓</u> Depleted Ma	, ,					de MLRA 150A, 150B)	. DD D T\	
	cky Mineral (A7) <b>(LR</b>				` '		_		t Floodplain Soils (F19) (I		
	esence (A8) (LRR U)		Depleted Da		, ,				ous Bright Floodplain Soils	; (F20)	
	ck (A9) (LRR P, T)	(//11)	Redox Depre		(ГО)			-	A <b>153B)</b> ent Material (F21)		
-	Below Dark Surface rk Surface (A12)	(A11)	Marl (F10) (L Depleted Oc	-	1) (MI P.	۸ 151)			allow Dark Surface (F22)		
	airie Redox (A16) ( <b>M</b>	II RA 150				-			itside MLRA 138, 152A i	n Fl 154)	
	osulfide (A18)	LIVA 130	Umbric Surfa		,	, .	0,1,1)	•	xplain in Remarks)	111 L, 134)	
	ucky Mineral (S1) <b>(L</b>	RR O. S				-	-	_ 011101 (2)	kpiairi ir remarkoj		
-	eyed Matrix (S4)	0, 0,	Reduced Ve	. , .		•	50B)	3Indicato	rs of hydrophytic vegetati	on and	
Sandy Re			Piedmont Flo	,			•	maioato	io oi riyaropriyilo vogetati	Jii ana	
-	Matrix (S6)		Anomalous I				-				
	face (S7) <b>(LRR P, S</b> ,	T, U)	(MLRA 14	_			,				
	e Below Surface (S8)		Very Shallov					wetlan	d hydrology must be pres	ent,	
(LRR S	S, T, U)		(MLRA 13	8, 152A	in FL, 1	54)	unless disturbed or problematic.				
Restrictive L	ayer (if observed):										
Type:											
	ches):						Hydric S	oil Presen	t? Yes V	<u></u>	
Remarks:											
Hydric s	oil indicator f	=3 ob:	served.								



Photograph 76: View of scrub/shrub wetlands at Data Point 41.



Photograph 77: View of non-hydric soil profile at Data Point 41.

#### **U.S. Army Corps of Engineers**

## WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: SRF Frankin - Kistler Trac	ct City/County: G	Greensville County Samplin	ng Date: 2025-05-08
Applicant/Owner: Otterdam Technolog	gy Group, LLC	State: <b>Virginia</b> Samplir	ng Point: DP-42
Investigator(s): Nikolai Karlov, Jackson Livingstone, Jilliar	· · · · · · · · · · · · · · · · · · ·		
Landform (hillside, terrace, etc.): Floodplain			ope (%): <b>1</b>
Subregion (LRR or MLRA): P 133A			· · · · · · · · · · · · · · · · · · ·
		*	
Soil Map Unit Name: 40A - Woodington f		<del></del>	
Are climatic / hydrologic conditions on the site typi		S No (If no, explain in	Remarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are "N	Normal Circumstances" present? Ye	es No
Are Vegetation, Soil, or Hydrology	naturally problematic? (If nee	eded, explain any answers in Remarks.)	
SUMMARY OF FINDINGS – Attach site	e map showing sampling point	locations, transects, importan	it features, etc.
Hydrophytic Vegetation Present? Yes	No Is the Sample	d Area	
Hydric Soil Present? Yes	<del></del> '		
Wetland Hydrology Present? Yes	No No	<del></del>	_
Remarks: Data point taken on a floodplai	n tying into an adiacont s	troom/swamp system. Th	o area
appeared to have been very re	•		•
vegetation, this is not consider	ed a Normal Condition. C	onditions wetter than nor	rmal for this
time of year.			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicators (minimum	n of two required)
Primary Indicators (minimum of one is required; of		Surface Soil Cracks (B6)	
Surface Water (A1)	Aquatic Fauna (B13)	Sparsely Vegetated Conca	ve Surface (B8)
High Water Table (A2)	Marl Deposits (B15) (LRR U)	Drainage Patterns (B10)	
Saturation (A3)	Hydrogen Sulfide Odor (C1)	Moss Trim Lines (B16)	
Water Marks (B1)	Oxidized Rhizospheres on Living Roots	· · · · · · · · · · · · · · · · · · ·	C2)
Sediment Deposits (B2)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)	(00)
Drift Deposits (B3)	Recent Iron Reduction in Tilled Soils (C	· · · · · · · · · · · · · · · · · · ·	I Imagery (C9)
Algal Mat or Crust (B4)	Thin Muck Surface (C7)	Geomorphic Position (D2)	
Iron Deposits (B5)	Other (Explain in Remarks)	Shallow Aquitard (D3)	
Inundation Visible on Aerial Imagery (B7)		FAC-Neutral Test (D5)	D.T. II)
Water-Stained Leaves (B9)		Sphagnum Moss (D8) (LRI	K 1, U)
Field Observations:	Donath (inch an) (		
Surface Water Present? Yes V	Depth (inches): 0 Depth (inches):		
	·	Motland Hydrology Procent?	os V No
Saturation Present? Yes No (includes capillary fringe)	Depth (inches): 20 V	Vetland Hydrology Present? Ye	es No
Describe Recorded Data (stream gauge, monitor	ring well aerial photos, previous inspecti	ons) if available:	
Dosonbe Necorded Data (effeatin gaage, mormer	mig well, dental priotos, previous inspessio	onoj, ii avaliabio.	
D			
Remarks:			
Wetland hydrology indicators of	observed.		
,			

**VEGETATION (Five Strata)** – Use scientific names of plants.

<b>'EGETATION (Five Strata)</b> – Use scient	ific names	of plants.		Sampling Point: DP-42
Tree Stratum (Plot size: 30 ft r	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Betula nigra	5		FACW	Number of Dominant Species
2. Ilex opaca	5		FAC	That Are OBL, FACW, or FAC: 8 (A)
3. Liquidambar styraciflua	2		FAC	Total Number of Dominant
4. Liriodendron tulipifera	2		FACU	Species Across All Strata: 8 (B)
5. Quercus alba	2		FACU	··
6. <del>Quercus albu</del>			FACU	Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)
	16	=Total Cover		Prevalence Index worksheet:
50% of total cover: 8.00	20%	of total cover:	3.20	Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 30 ft r )				OBL species 0 x 1 = 0
1. Ilex opaca	3	~	FAC	FACW species $20$ $x 2 = 40$
2. Acer rubrum	2	<u> </u>	FAC	FAC species $25$ $x 3 = 75$
3. Magnolia virginiana	2		FACW	FACU species 4 x 4 = 16
4.				UPL species $0$ $x = 0$
5.				10
5				Prevalence Index = B/A = 2.67
		=Total Cover		Hydrophytic Vegetation Indicators:
50% of total cover: 3.50	0 20%	of total cover:	1.40	1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30 ft r )				✓ 2 - Dominance Test is >50%
1				✓ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
<u>2</u> .				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.				
4.				
5.				1
6.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
0.		Tatal Cause		
500/ / / /		=Total Cover		Definitions of Five Vegetation Strata:
50% of total cover:	20%	of total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 30 ft r )				approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).
Arundinaria tecta	8		FACW	(7.0 cm) of larger in diameter at breast height (DBH).
Athyrium asplenioides	5		FAC	Sapling – Woody plants, excluding woody vines,
3. Osmundastrum cinnamomeum	5	~	FACW	approximately 20 ft (6 m) or more in height and less
4. Rumex crispus	3		FAC	than 3 in. (7.6 cm) DBH.
5. Smilax rotundifolia	3		FAC	Shrub - Woody Plants, excluding woody vines,
5. Vitis rotundifolia	2		FAC	approximately 3 to 20 ft (1 to 6 m) in height.
7.				
				Herb – All herbaceous (non-woody) plants, including
3.				herbaceous vines, regardless of size, <u>and</u> woody plants, except woody vines, less than approximately 3
9				ft (1 m) in height.
10				
l1				Woody Vine – All woody vines, regardless of height.
	26	=Total Cover		
50% of total cover: 13.0	20%	of total cover:	5.20	
Noody Vine Stratum (Plot size: 30 ft r )				
1				
2. 3.				
4				
5				Hydrophytic
		=Total Cover		Vegetation
50% of total cover:	20%	of total cover:		Present? Yes V No No
Remarks: (If observed, list morphological adaptation	ons below.)			•

# **VEGETATION Continued (Five Strata)** – Use scientific names of plants. Sampling Point: DP-42

Tree Stratum		Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Five Vegetation Strata:
7					Tree – Woody plants, excluding woody vines,
8. 9.					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,
11					approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
12		16	=Total Cover		
	50% of total cover: 8.00		of total cover:	3.20	<b>Shrub</b> - Woody Plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum				<u></u>	Herb – All herbaceous (non-woody) plants, including
7					herbaceous vines, regardless of size, and woody
8					plants, except woody vines, less than approximately 3 ft (1 m) in height.
					Woody Vine – All woody vines, regardless of height.
					Woody Wile - All Woody Villes, regardless of fielgrit.
12.					
	_	7 =	=Total Cover		
	50% of total cover: <b>3.50</b>	20%	of total cover:	1.40	
Shrub Stratum	30 ft r				
_					
-					
11.					
12.					
			=Total Cover		
	50% of total cover:	20%	of total cover:		
Herb Stratum					
4.4					
45		·			
16					
18.					
19 20.					
21					
22.					
			=Total Cover		
	50% of total cover: 13.00	<u>0</u> 20%	of total cover:	5.20	
Woody Vine Stratum  6.					
7					
8.					
9.					
10.					
			=Total Cover		
	50% of total cover:		of total cover:		
кетагкs: (If observed, li	ist morphological adaptation	is below.)			

Profile Desc	ription: (Describe t	o the de	pth needed to doc	ıment tl	ne indica	ator or c	onfirm the absence	of indicators.)	
Depth	Matrix		Redo	x Featur	es				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks	
0 - 6	10YR 2/1	100					Silt Loam		
6 - 12	10YR 3/1	100					Loam		
12 - 20	10YR 5/1	100					Sandy Loam		
20 - 24	10YR 5/1	45	10YR 5/6	10	С	М	Sandy Clay Loam		
20 - 24	2.5Y 7/1	45					Sandy Clay Loam		
-									
<sup>1</sup> Type: C=Co	ncentration, D=Depl	etion, RN	/=Reduced Matrix, N	/IS=Mas	ked San	d Grains	. <sup>2</sup> Location:	PL=Pore Lining, M=Matrix.	
Hydric Soil I	ndicators: (Applica	ble to all	LRRs, unless other	erwise n	oted.)		Indicators	for Problematic Hydric Soils <sup>3</sup> :	
Histosol	(A1)		Thin Dark S	urface (S	89) <b>(LRR</b>	S, T, U)	1 cm M	uck (A9) (LRR O)	
Histic Ep	ipedon (A2)		Barrier Islan	ds 1 cm	Muck (S	12)	2 cm M	uck (A10) (LRR S)	
Black His	stic (A3)		(MLRA 15	3B, 153	D)		——Coast F	Prairie Redox (A16)	
Hydroger	n Sulfide (A4)		Loamy Muck	y Miner	al (F1) <b>(L</b>	.RR O)	(outs	ide MLRA 150A)	
Stratified	Layers (A5)		Loamy Gley	ed Matri	x (F2)		Reduce	ed Vertic (F18)	
Organic I	Bodies (A6) (LRR P,	T, U)	Depleted Ma	trix (F3)			(outs	ide MLRA 150A, 150B)	
5 cm Mud	cky Mineral (A7) (LR	R P, T, L	Redox Dark	Surface	(F6)		Piedmo	ont Floodplain Soils (F19) (LRR P, T)	
Muck Pre	esence (A8) (LRR U)		Depleted Da	rk Surfa	ce (F7)		Anoma	lous Bright Floodplain Soils (F20)	
1 cm Mu	ck (A9) (LRR P, T)		Redox Depre	essions	(F8)		(MLR	A 153B)	
	Below Dark Surface	(A11)	 Marl (F10) <b>(I</b>	RR U)	` ,			rent Material (F21)	
-	rk Surface (A12)	` ,	Depleted Oc	-	1) <b>(MLR</b>	A 151)		nallow Dark Surface (F22)	
	airie Redox (A16) ( <b>M</b>	LRA 150				-	•	outside MLRA 138, 152A in FL, 154)	
	osulfide (A18)		Umbric Surfa					Explain in Remarks)	
	ucky Mineral (S1) <b>(L</b> l	RR O. S)		,				,	
-	leyed Matrix (S4)	0, 0,	Reduced Ve			•	50B) <sup>3</sup> Indicat	ors of hydrophytic vegetation and	
Sandy Re			Piedmont Flo	•			,	ors or rivaropriyae vegetation and	
-	Matrix (S6)		Anomalous I	•	,	, ,	•		
	face (S7) <b>(LRR P, S,</b>	т ш	(MLRA 14	•		,	-0)		
	e Below Surface (S8)		Very Shallov	•		·	wetla	and hydrology must be present,	
(LRR S		,	(MLRA 13		`	,	unless disturbed or problematic.		
Restrictive L	ayer (if observed):								
Type:								,	
	ches):						Hydric Soil Prese	ent? Yes V No No	
Remarks:									
Hydric s	oil indicator A	411 ok	served.						
,									



Photograph 78: View of wetlands at Data Point 42. This area was recently subject to



Photograph 79: View of hydric soil profile at Data Point 42.

#### **U.S.** Army Corps of Engineers

## WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: SRF Frankin - Kistler Tract City/County	:Greensville County Sampling Date: 2025-05-08
Applicant/Owner: Otterdam Technology Group, LLC	State: Virginia Sampling Point: DP-43
Investigator(s): Nikolai Karlov, Jackson Livingstone, Jillian Burgan, Kyle Zinn, WSSI Section, Townsh	nip, Range:
Landform (hillside, terrace, etc.): Hillslope Local relief (concav	ve, convex, none): Linear Slope (%): 5
Subregion (LRR or MLRA): P 133A Lat: 36.79582967	Long: -77.51713167 Datum: NAD 83
Soil Map Unit Name: 10B3 - Craven clay loam, 2 to 6 percent slopes, se	
	/es No ✓ (If no, explain in Remarks.)
	e "Normal Circumstances" present? Yes No
	needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling po	
Hydrophytic Vegetation Present? Yes No V Is the Sam	alad Araa
Hydrophytic Vegetation Present?  Hydric Soil Present?  Yes  No  Is the Samp  Within a We	·
Wetland Hydrology Present?	.uaiu: 103
Remarks: Data point taken in upland hillslope above wetland fing	ner Nonhydric soils no hydrology and
the area appeared to have been very recently clear-cu	
	•
existing vegetation, this is not considered a Normal Co	ondition. Conditions wetter than normal
for this time of year.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)  Marl Deposits (B15) (LRR U)	Drainage Patterns (B10)
Saturation (A3) Hydrogen Sulfide Odor (C1)	Moss Trim Lines (B16)
Water Marks (B1) Oxidized Rhizospheres on Living Ro	
Sediment Deposits (B2)  Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Drift Deposits (B3) Recent Iron Reduction in Tilled Soils	
Algal Mat or Crust (B4) Thin Muck Surface (C7)	Geomorphic Position (D2)
Iron Deposits (B5) Other (Explain in Remarks)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)
Water-Stained Leaves (B9)	
	Sphagnum Moss (D8) (LRR T, U)
Field Observations:	Sphagnum Moss (D8) (LRR T, U)
Field Observations:  Surface Water Present? Yes No Depth (inches):	Sphagnum Moss (D8) (LRR T, U)
Field Observations:  Surface Water Present? Yes No Depth (inches):  Water Table Present? Yes No Depth (inches):	
Field Observations:  Surface Water Present? Yes No Depth (inches):  Water Table Present? Yes No Depth (inches):  Saturation Present? Yes No Depth (inches):	Sphagnum Moss (D8) (LRR T, U)  Wetland Hydrology Present? Yes No
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 _ ✓
Field Observations:  Surface Water Present? Yes No Depth (inches):  Water Table Present? Yes No Depth (inches):  Saturation Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes No _ ✓
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_ ✓
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_ ✓
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)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections)  Remarks:	Wetland Hydrology Present? Yes No_ ✓
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)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	Wetland Hydrology Present? Yes No_ ✓
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)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections)  Remarks:	Wetland Hydrology Present? Yes No_ ✓
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)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections)  Remarks:	Wetland Hydrology Present? Yes No_ ✓
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)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections)  Remarks:	Wetland Hydrology Present? Yes No_ ✓
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)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections)  Remarks:	Wetland Hydrology Present? Yes No _ ✓
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)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections)  Remarks:	Wetland Hydrology Present? Yes No _ ✓
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)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections)  Remarks:	Wetland Hydrology Present? Yes No_ ✓

**VEGETATION (Five Strata)** – Use scientific names of plants.

Sampling Point: DP-43

Tree Stratum (Plot size: 30 ft r )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1.				Number of Dominant Species
2.				That Are OBL, FACW, or FAC: 1 (A)
3				Total Number of Dominant
4				Species Across All Strata: 2 (B)
5.				Percent of Dominant Species
6.		T-1-1 0		That Are OBL, FACW, or FAC: 50.00 (A/B)
FOO/ of total cover		Total Cover		Prevalence Index worksheet:
50% of total cover:	20%	of total cover:		Total % Cover of: Multiply by:
Sapling Stratum (Plot size: 30 ft r )				OBL species $0 \times 1 = 0$
•				FACW species $0$ $x = 0$
2.				FAC species 5 x 3 = 15
3.				FACU species 7
4				UPL species $0$ $x = 0$
5				Column Totals: 12 (A) 43 (B)
6.				Prevalence Index = B/A = 3.58
	=	Total Cover		Hydrophytic Vegetation Indicators:
50% of total cover:	20%	of total cover:		1 - Rapid Test for Hydrophytic Vegetation
Shrub Stratum (Plot size: 30 ft r )				2 - Dominance Test is >50%
1				3 - Prevalence Index is ≤3.0 <sup>1</sup>
2.				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
3.				
4				
5.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be
6.				present, unless disturbed or problematic.
		Total Cover		Definitions of Five Vegetation Strata:
50% of total cover:	20%	of total cover:		Tree – Woody plants, excluding woody vines,
Herb Stratum (Plot size: 30 ft r )				approximately 20 ft (6 m) or more in height and 3 in.
1. Vitis rotundifolia	5	<b>✓</b>	FAC	(7.6 cm) or larger in diameter at breast height (DBH).
2. Liriodendron tulipifera	3	<u> </u>	FACU	Sapling – Woody plants, excluding woody vines,
3. Eupatorium capillifolium	2		FACU	approximately 20 ft (6 m) or more in height and less
4. Quercus rubra	2		FACU	than 3 in. (7.6 cm) DBH.
5.				Shrub - Woody Plants, excluding woody vines,
6.				approximately 3 to 20 ft (1 to 6 m) in height.
7.				Harb All harbassaus (non woods) plants including
8.				Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, <u>and</u> woody
0				plants, except woody vines, less than approximately 3
10.				ft (1 m) in height.
11.				Woody Vine – All woody vines, regardless of height.
···	12	Total Cover		
50% of total cover: 6.00		of total cover:	2.40	
	2070	oi total cover.	2.40	
Woody Vine Stratum (Plot size: 30 ft r )				
1.				
2				
3.				
4				
5				Hydrophytic
	=	Total Cover		Vegetation
50% of total cover:				, , ,
	20%	of total cover:		Present? Yes No V

# **VEGETATION Continued (Five Strata)** – Use scientific names of plants. Sampling Point: DP-43

Tree Stratum		Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Five Vegetation Strata:
					Tree – Woody plants, excluding woody vines,
Ω					approximately 20 ft (6 m) or more in height and 3 in.
9					(7.6 cm) or larger in diameter at breast height (DBH).
10					Sapling – Woody plants, excluding woody vines,
11					approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
		:	=Total Cover		Shrub - Woody Plants, excluding woody vines,
	50% of total cover:	20%	of total cover:		approximately 3 to 20 ft (1 to 6 m) in height.
Sapling Stratum					Herb - All herbaceous (non-woody) plants, including
	_				herbaceous vines, regardless of size, <u>and</u> woody plants, except woody vines, less than approximately 3
					ft (1 m) in height.
					Woody Vine – All woody vines, regardless of height.
					<b>Woody Ville</b> – All Woody Villes, regardless of fleight.
12					
	500/ // /		=Total Cover		
01 1 01 1	50% of total cover:	20%	of total cover:		
Shrub Stratum	30 ft r				
_					
10.	_				
11.	_				
12					
			=Total Cover		
	50% of total cover:	20%	of total cover:		
Herb Stratum					
12.					
16.					
17 18.					
20.					
24					
22.					
		12	=Total Cover		
	50% of total cover: 6.00		of total cover:	2 40	
Woody Vine Stratum	<u>0.00</u>	2070	or total cover.		
6.					
7.	_				
8.					
9.	_				
10.					
			=Total Cover		
	50% of total cover:		of total cover:		
Remarks: (If observed	list morphological adaptation				1
rtomanto. (ii observed,	iist morphological adaptation	DOIOW.)			

Profile Desc	ription: (Describe	to the depth	needed to docu	ıment t	he indica	tor or c	onfirm th	ne absence c	of indica	tors.)		
Depth	Matrix		Redo	x Featu								
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Te	exture		Rem	arks	
0 - 12	10YR 4/2	100					Loamy	y Sand				
12 - 24	2.5Y 5/4	100					Sand					
-			_									
-												
<sup>1</sup> Type: C=Co	oncentration, D=Depl	etion, RM=R	Reduced Matrix, N	/IS=Mas	ked Sand	d Grains		<sup>2</sup> Location: F	PL=Pore	Lining, M=N	∕latrix.	
Hydric Soil I	ndicators: (Applica	ble to all LF	RRs, unless othe	rwise r	oted.)			Indicators f	or Probl	lematic Hyd	dric Soils	3:
Histosol	(A1)		Thin Dark Su	urface (S	69) <b>(LRR</b>	S, T, U)		1 cm Mu	uck (A9)	(LRR O)		
	ipedon (A2)	-	Barrier Island	ds 1 cm	Muck (S	12)		2 cm Mu	uck (A10	) (LRR S)		
Black His	stic (A3)		(MLRA 15	3B, 153	D)			Coast P	rairie Re	edox (A16)		
Hydroge	n Sulfide (A4)		Loamy Muck	y Miner	al (F1) <b>(L</b>	RR O)		(outsi	ide MLR	A 150A)		
	Layers (A5)	-	Loamy Gleye						d Vertic	. ,		
_	Bodies (A6) (LRR P,		Depleted Ma					-		A 150A, 15	-	
	cky Mineral (A7) <b>(LR</b>		Redox Dark							olain Soils (		-
	esence (A8) (LRR U)		Depleted Da						-		lplain Soils (F20)	
	ck (A9) <b>(LRR P, T)</b>		Redox Depre		(F8)			-	A 153B)			
	Below Dark Surface	e (A11)	Marl (F10) <b>(L</b>	-	4) <b>(84) D</b> (	454		— Red Par		` '	(F00)	
	rk Surface (A12)	U DA 450A\	Depleted Oc			-	O D T)	Very Sh				454\
	rairie Redox (A16) (N	ILKA 15UA)			asses (F12) (LRR O, P, T) (outside MLRA 138, 152A in FL 3) (LRR P, T, U) Other (Explain in Remarks)				_, 154)			
	iosulfide (A18)	DD () ()	Umbric Surfa			-		Other (E	explain in	i Remarks)		
-	lucky Mineral (S1) <b>(L</b> leyed Matrix (S4)	KK (), (3)	Delta Ochric Reduced Ve			•	50B)	31		al		ام مد
Sandy R		-	Piedmont Flo	•			•		ors or nye	drophytic ve	egetation a	ina
-	Matrix (S6)	-	Anomalous E				-					
	face (S7) (LRR P, S	. T. U)	(MLRA 14	_			_0,					
	e Below Surface (S8	-	Very Shallow		_			wetla	nd hvdro	ology must b	e present	
	S, T, U)	· •	(MLRA 13				unless disturbed or problematic.					
Restrictive I	_ayer (if observed):											
Type:												
Depth (ir	nches):						Hydri	ic Soil Prese	nt?	Yes	No_	<u> </u>
Remarks:												
Hydric s	oil indicators	not obs	served.									



Photograph 80: View of uplands at Data Point 43. This area was recently subject to clearcutting.



Photograph 81: View of non-hydric soil profile at Data Point 43.

#### **U.S. Army Corps of Engineers**

## WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: SRF Franklin - Kistler T	ract	City/County: Greens	ille County	Sampling Date: 2025-05-08
Applicant/Owner: Otterdam Techno	logy Group, LLC	<u> </u>	State: Virginia	Sampling Point: DP-44
Investigator(s): Lindsey Shortt, Julia		ction, Township, Range:		
Landform (hillside, terrace, etc.): Hillslope		relief (concave, convex,	none): Concave	Slope (%): 5
Subregion (LRR or MLRA): P 133A			77.51137389	Datum: NAD 83
Soil Map Unit Name: 31A - Roanoke loa				
Are climatic / hydrologic conditions on the site	typical for this time of year?	Yes	No (If no, ex	xplain in Remarks.)
Are Vegetation, Soil, or Hydrolo	ogysignificantly disturb	bed? Are "Normal C	ircumstances" present?	Yes No
Are Vegetation, Soil, or Hydrold	ogynaturally problema	atic? (If needed, exp	olain any answers in Re	marks.)
SUMMARY OF FINDINGS – Attach	<u> </u>		ons, transects, im	portant features, etc.
Hydrophytic Vegetation Present?	Yes No	Is the Sampled Area		
Hydric Soil Present?	Yes No	within a Wetland?	Yes	No 🗸
Wetland Hydrology Present?	Yes No V			
Remarks: Data point taken adjacent to	a forested swamp	o in the northea	stern portion o	of the study area.
Area appears to have been r				
• •	occinity creaticals	oonandne nen	or triair restricts	Tor and and J.
year.				
HYDROLOGY	_			
			Casandary Indicators (	minimum of two required)
Wetland Hydrology Indicators:	ad: chack all that apply)			minimum of two required)
Primary Indicators (minimum of one is require Surface Water (A1)	Aquatic Fauna (B13)		Surface Soil Crack	s (B6) d Concave Surface (B8)
\ <del></del>		וום	Drainage Patterns	
High Water Table (A2) Saturation (A3)	Marl Deposits (B15) (LR			
<del></del> -	Hydrogen Sulfide Odor (		Moss Trim Lines (E	
Water Marks (B1) Sediment Deposits (B2)	Oxidized Rhizospheres of Presence of Reduced Iro	= ' '	Dry-Season Water Crayfish Burrows (	
Drift Deposits (B3)	Recent Iron Reduction in	` ,		on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Thin Muck Surface (C7)		Geomorphic Position	=
Iron Deposits (B5)	Other (Explain in Remark		Shallow Aquitard (I	
Inundation Visible on Aerial Imagery (B7)		K5)	FAC-Neutral Test (	
Water-Stained Leaves (B9)	)		Sphagnum Moss (I	` '
Field Observations:		<u> </u>	Opinagrium Woss (I	DO) (EKK 1, 0)
	No Depth (inches):			
	No Depth (inches):			
Saturation Present? Yes	No Pepth (inches):		Hydrology Present?	Yes No 🗸
(includes capillary fringe)	Deptil (iliches).		Tydrology Fresent:	162 NO
Describe Recorded Data (stream gauge, mor	nitoring well, aerial photos, pr	revious inspections) if a	vailable:	
Describe Necorded Data (Silvain gauge, mor	moning well, acrial photos, pr	revious inspections), ii av	raliable.	
Remarks:				
No water table or saturation	encountered with	in 24" of the ar	ound surface.	

 VEGETATION (Four Strata) – Use scientific names of plants.
 Sampling Point:
 DP-44

Troo Stratum (Plot aiza: a a s.	Absolute % Cover	Dominant Species?	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r )	% Cover	Species?	Status	
2.				Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
3				Total Number of Dominant
4				Species Across All Strata: 2 (B)
5 6.				Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)
7.				Prevalence Index worksheet:
8.				Total % Cover of: Multiply by:
		=Total Cover		OBL species 0 $x = 0$
50% of total cover:	20%	of total cover		FACW species $8   x 2 = 16$
Sapling/Shrub Stratum (Plot size: 30 ft r				FAC species $11$ $x 3 = 33$
1.				FACU species 0 x 4 = 0
2.				UPL species $0   x 5 = 0$
3.				Column Totals: 19 (A) 49 (B)
4.				Prevalence Index = B/A = 2.57
5.				Hydrophytic Vegetation Indicators:
6.				1 - Rapid Test for Hydrophytic Vegetation
7.				✓ 2 - Dominance Test is >50%
8.				3 - Prevalence Index is ≤3.0 <sup>1</sup>
		=Total Cover		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
50% of total cover:	20%	of total cover		
Herb Stratum (Plot size: 30 ft r )				
Clethra alnifolia	8	<u> </u>	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be
2. Acer rubrum	5		FAC	present, unless disturbed or problematic.
Smilax rotundifolia	3		FAC	Definitions of Four Vegetation Strata:
4. Vitis rotundifolia	3		FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5				more in diameter at breast height (DBH), regardless of
6				height.
7				Sapling/Shrub – Woody plants, excluding vines, less
8.				than 3 in. DBH and greater than 3.28 ft (1 m) tall.
9				
10				<b>Herb</b> – All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				
		=Total Cover		Woody Vine – All woody vines greater than 3.28 ft in
50% of total cover: 9.50	20%	of total cover	3.80	height.
Woody Vine Stratum (Plot size: 30 ft r )				
1				
2.				
3.				
4				
5				Hydrophytic
	=To	tal Cover 20%		Vegetation
50% of total cover:		of total cover		Present? Yes No No
Remarks: (If observed, list morphological adaptatio	ns below.)			
Hydrophytic vegetation observed	d			
	u.			

VEGETATION Continued (Four Strata)	– Use sciei	ntific names	s of plants.	Sampling Point:
	Absolute	Dominant	Indicator	
Tree Stratum	% Cover	Species?	Status	Definitions of Four Vegetation Strata:
9				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) o
10				more in diameter at breast height (DBH), regardless of
11				height.
12.				
13.				Sapling/Shrub – Woody plants, excluding vines, less
14.				than 3 in. DBH and greater than 3.28 ft (1 m) tall.
15.				
15.				Herb - All herbaceous (non-woody) plants, regardless
16		Tatal Cause		of size, and woody plants less than 3.28 ft tall.
		=Total Cover		
50% of total cover:	20%	of total cover:		<b>Woody Vine</b> – All woody vines greater than 3.28 ft in
Sapling/Shrub Stratum				height.
9				
10				
11.				
12.				
13.				
14.				
15.				
15				
16				
		=Total Cover		
50% of total cover:	20%	of total cover:		
Herb Stratum				
13				
14				
15				
16.				
17.				
18				
19.				
20				
21				
22.				
23				
24				
	19 :	=Total Cover		
50% of total cover: 9.50	20%	of total cover:	3.80	
Woody Vine Stratum				
6.				
7.				
0				
0				
10				
		=Total Cover		
50% of total cover:	20%	of total cover:	·	
Remarks: (If observed, list morphological adaptation	ns below.)			•
Hydrophytic vegetation observe	d.			
<del>-</del>				

Profile Desc	ription: (Describe t	o the depth	needed to docu	ıment t	he indica	tor or c	onfirm th	e absence of	findicat	ors.)		
Depth	Matrix		Redox	x Featur	res							
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Te	xture		Rema	arks	
0 - 10	10YR 4/2	100					Loamy	Sand				
10 - 18	2.5Y 4/2	60					Loamy	Sand				_
10 - 18	2.5Y 5/3	40					Loamy	Sand				
-												
-												
-												
							-					
¹Type: C=Cc	oncentration, D=Depl	etion, RM=R	teduced Matrix, N	 IS=Mas	ked Sand	d Grains		<sup>2</sup> Location: Pl	L=Pore L	ining, M=N	/latrix.	
	ndicators: (Applica							Indicators fo				3.
Histosol		-	Thin Dark Su		-	S, T, U)		1 cm Mu		_		
	ipedon (A2)	_	Barrier Island			-		2 cm Mu		-		
Black His	stic (A3)		(MLRA 15	3B, 153	(D)		,	Coast Pr	airie Red	dox (A16)		
	n Sulfide (A4)		Loamy Muck		-	RR O)		(outsic	de MLRA	150A)		
Stratified	Layers (A5)	-	Loamy Gleye	ed Matri	x (F2)			Reduced	l Vertic (I	<del>-</del> 18)		
Organic I	Bodies (A6) (LRR P,	T, U)	Depleted Ma				•			150A, 150	0B)	
5 cm Mu	cky Mineral (A7) (LR	R P, T, U)	Redox Dark	Surface	(F6)			-		ain Soils (I	-	R P, T)
	esence (A8) (LRR U)	-	Depleted Da							t Floodplaii		-
1 cm Mu	ck (A9) (LRR P, T)	•	Redox Depre						(153B)			·
Depleted	Below Dark Surface	(A11)	 Marl (F10) <b>(L</b>	.RR U)			•	—— Red Parent Material (F21)				
Thick Dark Surface (A12)  Depleted Ochric (F11) (MLRA 151)						A 151)	Very Shallow Dark Surface (F22)					
Coast Pr	airie Redox (A16) ( <b>M</b>	LRA 150A)	Iron-Mangan	ese Ma	sses (F12	2) <b>(LRR</b>	O, P, T) (outside MLRA 138, 152A in FL, 154)					
Iron Monosulfide (A18) Umbric Surface (F13) (LRR P, T, U)							Other (Ex	xplain in	Remarks)			
Sandy M	ucky Mineral (S1) (L	RR O, S)	Delta Ochric	(F17) <b>(I</b>	MLRA 15	1)	•					
Sandy G	leyed Matrix (S4)	•	Reduced Ve	rtic (F18	) (MLRA	150A, 1	50B)	<sup>3</sup> Indicato	rs of hyd	rophytic ve	getation a	and
Sandy R	edox (S5)	•	Piedmont Flo	odplain	Soils (F	19) <b>(MLF</b>	RA 149A)		•		· ·	
Stripped	Matrix (S6)	•	Anomalous E	Bright Fl	oodplain	Soils (F2	20)					
Dark Sur	face (S7) (LRR P, S,	T, U)	(MLRA 14	9A, 153	C, 153D)	)						
Polyvalue	e Below Surface (S8)	)	Very Shallow	Dark S	Surface (F	22)		wetlan	nd hydrol	ogy must b	e present	,
(LRR S	S, T, U)		(MLRA 13	8, 152A	in FL, 1	54)	unless disturbed or problematic.					
	ayer (if observed):											
Type:	-L \		<u></u>				11	- 0 - !! D		<b>V</b>	NI-	
Remarks:	iches):						Hyaria	c Soil Presen	it?	Yes	No	
	-:::::											
Hyaric s	oil indicators	not obs	servea.									



Photograph 82: View of uplands at Data Point 44. This area was recently subject to clearcutting.

#### **U.S. Army Corps of Engineers**

### WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region

See ERDC/EL TR-10-20; the proponent agency is CECW-COR

OMB Control #: 0710-0024, Exp: 09/30/2027 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: SRF Franklin - Kistler Tract	City/County: Greensville County Sampling Date: 2025-05-08
Applicant/Owner: Otterdam Technology Group, LLC	State: Virginia Sampling Point: DP-45
	ection, Township, Range:
	Il relief (concave, convex, none): Concave Slope (%): 1
Subregion (LRR or MLRA): P 133A Lat: 36.7956509	
Soil Map Unit Name: 31A - Roanoke loam, 0 to 2 percent slo	
Are climatic / hydrologic conditions on the site typical for this time of year	
Are Vegetation, Soil, or Hydrology significantly dist	urbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrologynaturally problem	natic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sa	ampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes Vo	Is the Sampled Area
Hydric Soil Present? Yes No	within a Wetland? Yes ✓ No
Wetland Hydrology Present? Yes V No No	<del></del> <del></del>
Remarks: Data point taken in a forested swamp in the n	ortheastern portion of the study area. All three
·	tion, wetland hydrology, and hydric soils) were
satisfied at this point. Conditions wetter than	normal for this time of year.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Aquatic Fauna (B13)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)  Marl Deposits (B15) (L	
Saturation (A3) Hydrogen Sulfide Odo	
Water Marks (B1) Oxidized Rhizospheres	
Sediment Deposits (B2)  Presence of Reduced  Presence of Reduced	
Drift Deposits (B3) Recent Iron Reduction	
Algal Mat or Crust (B4) Thin Muck Surface (C7  Iron Deposits (B5) Other (Explain in Remains	· · · · · · · · · · · · · · · · · · ·
Inundation Visible on Aerial Imagery (B7)	FAC-Neutral Test (D5)
✓ Water-Stained Leaves (B9)	Sphagnum Moss (D8) (LRR T, U)
Field Observations:	
Surface Water Present? Yes No Depth (inches	):
Water Table Present? Yes No Depth (inches	
Saturation Present? Yes No Depth (inches	· <del></del>
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos,	previous inspections), if available:
Remarks:	
Wetland hydrology indicators observed.	

'EGETATION (Four Strata) – Use scie	millo marries	oi piants.		Sampling Point: DP-45
	Absolute	Dominant	Indicator	
Tree Stratum (Plot size: 30 ft r )	% Cover	Species?	Status	Dominance Test worksheet:
1. Acer rubrum	40		FAC	Number of Dominant Species
2. Quercus bicolor	20		FACW	That Are OBL, FACW, or FAC: 9 (A)
3. Betula nigra	10		FACW	Total Number of Dominant
4. Carpinus caroliniana	5		FAC	Species Across All Strata: 9 (B)
5. Diospyros virginiana	5		FAC	Percent of Dominant Species
6. Ilex opaca	5		FAC	That Are OBL, FACW, or FAC: 100.00 (A/B)
7				Prevalence Index worksheet:
8				Total % Cover of: Multiply by:
	85	=Total Cover		OBL species 7 x 1 = 7
50% of total cover: 42	2.50 20%	of total cover	17.00	FACW species 40 x 2 = 80
Sapling/Shrub Stratum (Plot size: 30 ft r	)			FAC species 108 x 3 = 324
1. Acer rubrum	 15	<b>✓</b>	FAC	FACU species $0$ $x 4 = 0$
2. Betula nigra	5		FACW	UPL species $0$ $x = 0$
3. Carpinus caroliniana	5		FAC	Column Totals: 155 (A) 411 (B)
4. Ilex opaca	5		FAC	Prevalence Index = B/A = 2.65
5. Quercus nigra	- <del>5</del>		FAC	Hydrophytic Vegetation Indicators:
6.			FAC	1 - Rapid Test for Hydrophytic Vegetation
7.				✓ 2 - Dominance Test is >50%
7. 8.				✓ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
0.	35	Tatal Causer		<del></del>
500/ / 1		=Total Cover	7.00	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
50% of total cover: 17	20%	of total cover	7.00	
Herb Stratum (Plot size: 30 ft r )				
Smilax rotundifolia	<u>15</u>		FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be
2. Juncus effusus	7	<u> </u>	OBL	present, unless disturbed or problematic.
3. Microstegium vimineum	5		FAC	Definitions of Four Vegetation Strata:
4. Ilex opaca	3		FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
5. Quercus bicolor	3		FACW	more in diameter at breast height (DBH), regardless of
6. Quercus phellos	2		FACW	height.
7.				
8.	_			Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.
9.				than 3 m. DBH and greater than 3.20 ft (1 m) tail.
10.				
11.				Herb – All herbaceous (non-woody) plants, regardless
12.				of size, and woody plants less than 3.28 ft tall.
	35	=Total Cover		Woody Vine – All woody vines greater than 3.28 ft in
50% of total cover: 17		of total cover	. 7.00	height.
	.50 20%	or total cover	. 7.00	
Woody Vine Stratum (Plot size: 30 ft r	)			
1				
2				
3				
4				
5				Hydrophytic
	<u>=</u> To	tal Cover 20%	, )	Vegetation
50% of total cover:		of total cover	:	Present? Yes No
Damania //f aban ad Patra and alasta in the	tions below			
Remarks: (If observed, list morphological adapta	tions below.)			

<b>VEGETATION Continued (Four Strata)</b> -	- Use scie	ntific names	of plants.	Sampling Point:
	Absolute	Dominant	Indicator	
Tree Stratum	% Cover	Species?	Status	Definitions of Four Vegetation Strata:
9.				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
				more in diameter at breast height (DBH), regardless of
				height.
11				
12				
13.				Sapling/Shrub – Woody plants, excluding vines, less
14				than 3 in. DBH and greater than 3.28 ft (1 m) tall.
14.				
15				<b>Herb</b> – All herbaceous (non-woody) plants, regardless
16				of size, and woody plants less than 3.28 ft tall.
		=Total Cover		
50% of total cover: 42.50	0 20%	of total cover:	17.00	Woody Vine – All woody vines greater than 3.28 ft in
		or total cover.		height.
Sapling/Shrub Stratum				noight.
9.				
10				
11.				
12				
13				
14				
15.				
16				
16		<del></del>		
		=Total Cover	7.00	
50% of total cover: 17.50	20%	of total cover:	7.00	
Herb Stratum				
13.				
13.				
14				
15				
16				
17				
18.				
19.				
20				
21				
22				
23.				
24				
	35	=Total Cover		
50% of total cover: 17.50	20%	of total cover:	7.00	
Woody Vine Stratum				
6				
7				
8				
9.				
10.				
		Total Carrie		
		=Total Cover		
50% of total cover:	20%	of total cover:		
Remarks: (If observed, list morphological adaptation	ns helow )			_1
Transand. (ii obodivou, iist morphological duaptatiol	io bolow.j			
Hydrophytic vegetation observed	d.			
	•••			

Profile Desc	ription: (Describe t	o the de	pth needed to docu	ument tl	ne indica	ator or c	onfirm the absenc	e of indic	ators.)		
Depth	Matrix		Redo	x Featur	es						
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Rem	arks	
0 - 6	10YR 4/1	95	10YR 5/6	5	С	М	Sandy Clay Loam				
6 - 12	2.5Y 4/1	80	7.5YR 4/6	20	С	М	Sandy Clay Loam	<u> </u>			
12 - 18	2.5Y 5/1	100					Sandy Loam				
-											
-											
-											
¹Type: C=Co	oncentration, D=Depl	etion, RN	M=Reduced Matrix, N	//S=Mas	ked San	d Grains	. <sup>2</sup> Location	: PL=Pore	E Lining, M=I	Matrix.	
Hydric Soil I	ndicators: (Applica	ble to al	I LRRs, unless othe	erwise n	oted.)		Indicator	s for Prol	olematic Hy	dric Soils³:	
Histosol	(A1)		Thin Dark Su	urface (S	9) <b>(LRR</b>	S, T, U)	1 cm	Muck (A9	) (LRR O)		
Histic Ep	ipedon (A2)		Barrier Island	ds 1 cm	Muck (S	12)	2 cm	Muck (A1	0) (LRR S)		
Black His	stic (A3)		(MLRA 15	3B, 153	D)		Coas	t Prairie R	edox (A16)		
Hydrogei	n Sulfide (A4)		Loamy Muck	y Miner	al (F1) <b>(L</b>	.RR O)	(ou	tside MLI	RA 150A)		
Stratified	Layers (A5)		Loamy Gleye	ed Matri	x (F2)		Redu	ced Vertic	(F18)		
Organic I	Bodies (A6) (LRR P,	T, U)	✓ Depleted Ma	trix (F3)			(ou	tside MLI	RA 150A, 15	0B)	
5 cm Mu	cky Mineral (A7) (LR	R P, T, L	J) Redox Dark	Surface	(F6)		Piedr	mont Floor	dplain Soils (	F19) <b>(LRR P, T)</b>	
Muck Pre	esence (A8) (LRR U)		Depleted Da	rk Surfa	ce (F7)		Anon	nalous Bri	ght Floodplai	in Soils (F20)	
1 cm Mu	ck (A9) (LRR P, T)		Redox Depre	essions	(F8)		(MI	-RA 153B	)		
Depleted	Below Dark Surface	(A11)	Marl (F10) <b>(L</b>	.RR U)			Red	Parent Ma	terial (F21)		
Thick Da	rk Surface (A12)		Depleted Oc	hric (F1	1) <b>(MLR</b>	A 151)	Very	Shallow D	ark Surface	(F22)	
Coast Pr	airie Redox (A16) ( <b>M</b>	LRA 150	DA) Iron-Mangar	ese Ma	sses (F1	2) <b>(LRR</b>	O, P, T)	(outside	MLRA 138,	152A in FL, 154)	
Iron Mon	osulfide (A18)		Umbric Surfa	ace (F13	) (LRR F	P, T, U)	Other	r (Explain	in Remarks)		
Sandy M	ucky Mineral (S1) (L	RR O, S	Delta Ochric	(F17) <b>(</b> I	MLRA 15	51)					
Sandy G	leyed Matrix (S4)		Reduced Ve	rtic (F18	) (MLRA	1 <b>50A</b> , 1	<b>50B)</b> <sup>3</sup> Indic	ators of h	ydrophytic ve	egetation and	
Sandy R	edox (S5)		Piedmont Flo	oodplain	Soils (F	19) <b>(ML</b> I					
Stripped	Matrix (S6)		Anomalous I	Bright Fl	oodplain	Soils (F	20)				
Dark Sur	face (S7) <b>(LRR P, S</b> ,	T, U)	(MLRA 14	9A, 153	C, 153D)	)					
Polyvalue	e Below Surface (S8)	)	Very Shallov	v Dark S	urface (F	-22)	we	tland hydi	ology must b	pe present,	
(LRR S	S, T, U)		(MLRA 13	8, 152A	in FL, 1	54)	un	less distur	bed or probl	ematic.	
	.ayer (if observed):										
Type:											
	iches):						Hydric Soil Pre	sent?	Yes	No	
Remarks:											
Hydric s	oil indicator F	-3 ob	served.								



Photograph 83: View of uplands at Data Point 45. This area was recently subject to clearcutting.

Attachment 2: NC DWQ Stream Identification Forms and Photographs

Date: 2025-04-22	<b>Project/Site</b> : SRF Franklin - Kister Tract	<b>Latitude:</b> 36.79576314
Evaluator: Jackson Livingstone, WSSI	County: Greensville County	<b>Longitude:</b> -77.50751559
<b>Total Points:</b> 47 Stream is at least intermittent if $\geq$ 19 or perennial if $\geq$ 30*	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name:

II = 10 or perermian = 00				
A. Geomorphology (Subtotal= 22 )	Absent	Weak	Moderate	Strong
1ª Continuity of channel bed and bank	0	1	(2)	3
Sinuosity of channel along thalweg	0	1	2	(3)
3. In-channel structure: ex. riffle-pool, step- pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	(2)	3
5. Active/relict floodplain	0	1	2	(3)
6. Depositional bars or benches	0	1	2	(3)
7. Recent alluvial deposits	0	1	(2)	3
8. Headcuts	0	(1)	2	3
9. Grade control	0	(0.5)	1	1.5
10. Natural valley	0	(0.5)	1	1.5
11. Second or greater order channel	No	= 0	(Yes = 3)	
a artificial ditches are not rated; see discussions in manual	•			
B. Hydrology (Subtotal = <u>13</u> )				_
12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	(3)
14. Leaf litter	(1.5)	1	0.5	0

12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	(3)
14. Leaf litter	(1.5)	1	0.5	Ö
15. Sediment on plants or debris	0	0.5	1	(1.5)
16. Organic debris lines or piles	0	0.5	(1)	1.5
17. Soil-based evidence of high water table?	N	lo = 0	Yes	=3

#### C. Biology (Subtotal = 12 )

18. Fibrous roots in streambed	3	(2)	1	0
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macrobenthos (note diversity and abundance)	Ō	1	(2)	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	Ö	0.5	(1)	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0	0.5	(1)	1.5
25. Algae	0	0.5	1	<b>(</b> 1.5 <b>)</b>
26. Wetland plants in streambed		FACW = 0.75;	OBL = 1.5 Other =	0

<sup>\*</sup>perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: Perennial stream with strong flow and a large, low-lying floodplain that drains into a nearby culvert and across Otterdam Road.

_		
C	ketch	٠
o	NEILLI	



Photograph 84: View of perennial stream at Stream Point 1.



Photograph 85: View of perennial stream at Stream Point 1.

NC DWQ Stream Identification Form	version 4.11			SD-2
Date: 2025-04-23	Project/Site: SF Tract	RF Franklin - Kiste	r <b>Latitude:</b> 36.8	0113774
Evaluator: Jackson Livingstone, WSSI	County: Greensville County		Longitude: -77	7.5107318
<b>Total Points:</b> 36.5 Stream is at least intermittent if $\geq$ 19 or perennial if $\geq$ 30*	Stream Determination (circle one) Ephemeral Intermitten Perennial			:
A. Geomorphology (Subtotal= 20 )	Absent	Weak	Moderate	Strong
1ª Continuity of channel hed and hank	0	1	2	(3)

A. Geomorphology (Subtotal= 20 )	Absent	Weak	Moderate	Strong
1 <sup>a.</sup> Continuity of channel bed and bank	0	1	2	(3)
2. Sinuosity of channel along thalweg	0	1	(2)	3
3. In-channel structure: ex. riffle-pool, step- pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	2	(3)
5. Active/relict floodplain	0	1	(2)	3
6. Depositional bars or benches	0	1	(2)	3
7. Recent alluvial deposits	0	1	(2)	3
8. Headcuts	0	1	(2)	3
9. Grade control	0	0.5	1	(1.5)
10. Natural valley	0	(0.5)	1	1.5
11. Second or greater order channel	No	=0	Yes	= 3

## B. Hydrology (Subtotal = <u>11</u>)

12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	(3)
14. Leaf litter	<b>(</b> 1.5)	1	0.5	Ō
15. Sediment on plants or debris	0	(0.5)	1	1.5
16. Organic debris lines or piles	0	0.5	(1)	1.5
17. Soil-based evidence of high water table?	N	o = 0	Yes	= 3

## C. Biology (Subtotal = 5.5)

3	2	(1)	0
(3)	2	1	0
0	1	2	3
(0)	1	2	3
0)	0.5	1	1.5
0	0.5	1	1.5
0	0.5	(1)	1.5
0	<b>(</b> 0.5 <b>)</b>	1	1.5
FACW = 0.75; OBL = 1.5 Other = 0			
	3 (3) (0) (0) (0) (0)	0 0.5 0 0.5 0 <b>0.5</b>	0 0.5 1 0 0.5 (1) 0 (0.5) 1

<sup>\*</sup>perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: Perennial stream that feeds into main system along the Otterdam Swamp.

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Photograph 86: View of perennial stream at Stream Point 2.



Photograph 87: View of perennial stream at Stream Point 2.

Date: 2025-04-23	<b>Project/Site</b> : SRF Franklin - Kister Tract	<b>Latitude:</b> 36.80250661
Evaluator: Jackson Livingstone, WSSI	County: Greensville County	Longitude: -77.5097436
<b>Total Points:</b> 27.25 Stream is at least intermittent if $\geq$ 19 or perennial if $\geq$ 30*	Stream Determination (circle one) Ephemeral (ntermitten) Perennial	Other e.g. Quad Name:

A. Geomorphology (Subtotal= 13.5 )	Absent	Weak	Moderate	Strong
1 <sup>a.</sup> Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	1	(2)	3
3. In-channel structure: ex. riffle-pool, step- pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	(2)	3
5. Active/relict floodplain	0	1	(2)	3
6. Depositional bars or benches	0	(1)	2	3
7. Recent alluvial deposits	0	(1)	2	3
8. Headcuts	0	(1)	2	3
9. Grade control	0	0.5	(1)	1.5
10. Natural valley	0	(0.5)	1	1.5
11. Second or greater order channel	No	0 = 0	Yes:	= 3

a artificial ditches are not rated; see discussions in manual

## B. Hydrology (Subtotal = 8.5)

12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	(2)	3
14. Leaf litter	1.5	(1)	0.5	0
15. Sediment on plants or debris	0)	0.5	1	1.5
16. Organic debris lines or piles	Õ	(0.5)	1	1.5
17. Soil-based evidence of high water table?	N	0 = 0	Yes	= 3

## C. Biology (Subtotal = 5.25 )

18. Fibrous roots in streambed	3	2	(1)	0
19. Rooted upland plants in streambed	3	(2)	1	0
20. Macrobenthos (note diversity and abundance)	0	1	2	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	0)	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0	(0.5)	1	1.5
25. Algae	0	0.5	(1)	1.5
26. Wetland plants in streambed	FACW = 0.75 OBL = 1.5 Other = 0			

<sup>\*</sup>perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: A break in perenniality observed as the stream ascends slightly in elevation. A decrease in flow, amphibian activity, and riffle-and-pool structure were observed.

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Photograph 88: View of intermittent stream at Stream Point 3.



Photograph 89: View of intermittent stream at Stream Point 3.

Date: 2025-04-24	<b>Project/Site</b> : SRF Franklin - Kister Tract	<b>Latitude:</b> 36.80322093
Evaluator: Jackson Livingstone, WSSI	County: Greensville County	Longitude: -77.51102528
<b>Total Points:</b> 30 Stream is at least intermittent if $\geq$ 19 or perennial if $\geq$ 30*	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name:

A. Geomorphology (Subtotal= 12.5 )	Absent	Weak	Moderate	Strong
1 <sup>a.</sup> Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step- pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	(1)	2	3
5. Active/relict floodplain	0	1	(2)	3
6. Depositional bars or benches	0	(1)	2	3
7. Recent alluvial deposits	0	(1)	2	3
8. Headcuts	0	(1)	2	3
9. Grade control	0	0.5	(1)	1.5
10. Natural valley	0	(0.5)	1	1.5
11. Second or greater order channel	No	= 0	Yes :	= 3

a artificial ditches are not rated; see discussions in manual

## B. Hydrology (Subtotal = 10)

12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	(3)
14. Leaf litter	<b>(</b> .5)	1	0.5	0
15. Sediment on plants or debris	0	(0.5)	1	1.5
16. Organic debris lines or piles	(0)	0.5	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes	= 3

## C. Biology (Subtotal = 7.5)

18. Fibrous roots in streambed	(3)	2	1	0
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macrobenthos (note diversity and abundance)	0	1	2	3
21. Aquatic Mollusks	0)	1	2	3
22. Fish	(0)	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	0	0.5	1	<b>(</b> 1.5 <b>)</b>
26. Wetland plants in streambed		FACW = 0.75;	OBL = 1.5 Other =	0

<sup>\*</sup>perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: Perennial stream that recieves year round flow from a large upgradient swamp through a culvert crossing Allen Road. The stream exhibits a well-incised channel along with a moderately extensive adjacent floodplain.

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Photograph 90: View of perennial stream at Stream Point 4.



Photograph 91: View of perennial stream at Stream Point 4.

Date: 2025-04-24	<b>Project/Site</b> : SRF Franklin - Kister Tract	<b>Latitude:</b> 36.8033483
Evaluator: Jackson Livingstone, WSSI	County: Greensville County	Longitude: -77.51115983
<b>Total Points:</b> 22.5 Stream is at least intermittent if $\geq$ 19 or perennial if $\geq$ 30*	Stream Determination (circle one) Ephemeral (intermittent) Perennial	Other e.g. Quad Name:

A. Geomorphology (Subtotal= 8 )	Absent	Weak	Moderate	Strong
1 <sup>a</sup> Continuity of channel bed and bank	0	(1)	2	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step- pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	(0)	1	2	3
5. Active/relict floodplain	Ö	1	2	(3)
6. Depositional bars or benches	0	(1)	2	3
7. Recent alluvial deposits	(0)	1	2	3
8. Headcuts	(0)	1	2	3
9. Grade control	Ö	<b>(</b> 0.5 <b>)</b>	1	1.5
10. Natural valley	0	(0.5)	1	1.5
11. Second or greater order channel	No = 0		Yes	= 3

a artificial ditches are not rated; see discussions in manual

## B. Hydrology (Subtotal = 8.5)

12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	(3)
14. Leaf litter	1.5	(1)	0.5	Ō
15. Sediment on plants or debris	(0)	0.5	1	1.5
16. Organic debris lines or piles	Ō	(6.5)	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes	= 3

#### C. Biology (Subtotal = 6 )

18. Fibrous roots in streambed	3	2	(1)	0
19. Rooted upland plants in streambed	3	(2)	Ī	0
20. Macrobenthos (note diversity and abundance)	0	1	2	3
21. Aquatic Mollusks	0)	1	2	3
22. Fish	(0)	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	Ō	0.5	1	<b>(</b> 1.5)
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0			

<sup>\*</sup>perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: A break in stream perenniality occurs as the stream loses bed-bank continuity and flow greatly decreases. The stream quickly dissipates into a larger floodplain area.

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Photograph 92: View of intermittent stream at Stream Point 5.



Photograph 93: View of intermittent stream at Stream Point 5.

Date: 2025-04-29	<b>Project/Site</b> : SRF Franklin - Kister Tract	<b>Latitude:</b> 36.80134271
Evaluator: Jackson Livingstone, WSSI	County: Greensville County	Longitude: -77.51634948
<b>Total Points:</b> 43.5 Stream is at least intermittent if $\geq$ 19 or perennial if $\geq$ 30*	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name:

A. Geomorphology (Subtotal=22)	Absent	Weak	Moderate	Strong
1 <sup>a.</sup> Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	1	(2)	3
3. In-channel structure: ex. riffle-pool, step- pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	2	(3)
5. Active/relict floodplain	0	1	(2)	3
6. Depositional bars or benches	0	1	2	(3)
7. Recent alluvial deposits	0	1	2	(3)
8. Headcuts	(0)	1	2	3
9. Grade control	0	(0.5)	1	1.5
10. Natural valley	0	(0.5)	1	1.5
11. Second or greater order channel	No = 0		Yes = 3	
a artificial ditches are not rated; see discussions in manual	•			
B. Hydrology (Subtotal = 10 )				
12 Processes of Recoflow	0	1	2	$\odot$

12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	(1)	2	3
14. Leaf litter	(1.5)	1	0.5	0
15. Sediment on plants or debris	0	(0.5)	1	1.5
16. Organic debris lines or piles	0	0.5	(1)	1.5
17. Soil-based evidence of high water table?	No = 0		Yes	=3

## C. Biology (Subtotal = 11.5 )

18. Fibrous roots in streambed	(3)	2	1	0
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macrobenthos (note diversity and abundance)	Ö	1	2	(3)
21. Aquatic Mollusks	0	1	2	3
22. Fish	Ō	0.5	(1)	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0	0.5	(1)	1.5
25. Algae	0	(0.5)	Ī	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0			

<sup>\*</sup>perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: Perennial stream with strong flow adjacent to a floodplain and a recently cutover area.

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Photograph 94: View of perennial stream at Stream Point 6.



Photograph 95: View of perennial stream at Stream Point 6.

Date: 2025-04-29	<b>Project/Site</b> : SRF Franklin - Kister Tract	<b>Latitude:</b> 36.80133399
Evaluator: Jillian Burgan, WSSI	County: Greensville County	Longitude: -77.51752614
<b>Total Points:</b> 46 Stream is at least intermittent if $\geq$ 19 or perennial if $\geq$ 30*	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name:

A. Geomorphology (Subtotal=26.5)	Absent	Weak	Moderate	Strong
1 <sup>a.</sup> Continuity of channel bed and bank	0	1	2	(3)
2. Sinuosity of channel along thalweg	0	1	(2)	3
3. In-channel structure: ex. riffle-pool, step- pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	2	(3)
5. Active/relict floodplain	0	(1)	2	3
6. Depositional bars or benches	0	1	2	(3)
7. Recent alluvial deposits	0	1	2	(3)
8. Headcuts	0	1	2	(3)
9. Grade control	0	0.5	1	<b>(</b> 1.5 <b>)</b>
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	No	0 = 0	Yes	= 3

a artificial ditches are not rated; see discussions in manual

### B. Hydrology (Subtotal = 10)

12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	(1)	2	3
14. Leaf litter	(1.5)	1	0.5	0
15. Sediment on plants or debris	0	<b>(</b> 0.5)	1	1.5
16. Organic debris lines or piles	0	0.5	(1)	1.5
17. Soil-based evidence of high water table?	N	o = 0	Yes	=3)

### C. Biology (Subtotal = 9.5)

18. Fibrous roots in streambed	(3)	2	1	0
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macrobenthos (note diversity and abundance)	0	1	(2)	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	Ō	0.5	(1)	1.5
23. Crayfish	0)	0.5	ī	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	Ō	(0.5)	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0			

<sup>\*</sup>perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: Perennial stream with strong baseflow, easily identifiable pool-riffle sequence, and several bars and benches along the sampled reach. Adjacent to floodplain and recently cutover area.

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Photograph 96: View of perennial stream at Stream Point 7.



Photograph 97: View of perennial stream at Stream Point 7.

Date: 2025-05-01	<b>Project/Site</b> : SRF Franklin - Kister Tract	<b>Latitude:</b> 36.79977188
Evaluator: Jackson Livingstone, WSSI	County: Greensville	Longitude: -77.52486096
<b>Total Points:</b> 26 Stream is at least intermittent if $\geq$ 19 or perennial if $\geq$ 30*	Stream Determination (circle one) Ephemeral (ntermitten) Perennial	Other e.g. Quad Name:

A. Geomorphology (Subtotal=7.5)	Absent	Weak	Moderate	Strong
1 <sup>a.</sup> Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step- pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	(1)	2	3
5. Active/relict floodplain	0)	Ī	2	3
6. Depositional bars or benches	0	1	2	3
7. Recent alluvial deposits	(0)	1	2	3
8. Headcuts	Ō	(1)	2	3
9. Grade control	0	0.5	1)	1.5
10. Natural valley	0	(0.5)	1	1.5
11. Second or greater order channel	No	=0	Yes :	= 3
a artificial ditches are not rated; see discussions in manual				
B. Hydrology (Subtotal = <u>10</u> )			_	
12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	(2)	3
14. Leaf litter	1.5	(1)	0.5	0
1. Codimont on planta or debrie	1 0		1	4 -

12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	(2)	3
14. Leaf litter	1.5	(1)	0.5	0
15. Sediment on plants or debris	0	(0.5)	1	1.5
16. Organic debris lines or piles	0	0.5	1	<b>(</b> 1.5)
17. Soil-based evidence of high water table?	N	o = 0	Yes	=3

#### C. Biology (Subtotal = 8.5)

18. Fibrous roots in streambed	3	(2)	1	0
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macrobenthos (note diversity and abundance)	0	(1)	2	3
21. Aquatic Mollusks	0	1	2	3
22. Fish	0)	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0	0.5	(1)	1.5
25. Algae	0	0.5	1	<b>(</b> 1.5 <b>)</b>
26. Wetland plants in streambed		FACW = 0.75;	OBL = 1.5 Other =	

<sup>\*</sup>perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: Intermittent stream located primarily within a recently clear-cut area. The stream appeared to be significantly disturbed, and debris has blocked many areas from flowing typically. However, evidence of baseflow, continuous bed and bank, and aquatic life were observed. These features appear to dissipate gradually as the stream climbs in elevation.

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Photograph 98: View of intermittent stream at Stream Point 8.



Photograph 99: View of intermittent stream at Stream Point 8.

Date: 2025-05-01	<b>Project/Site</b> : SRF Franklin - Kister Tract	<b>Latitude:</b> 36.79871795
Evaluator: Jackson Livingstone, WSSI	County: Greensville	Longitude: -77.52563657
<b>Total Points:</b> 14.75 Stream is at least intermittent if $\geq$ 19 or perennial if $\geq$ 30*	Stream Determination (circle one) Ephemera Intermittent Perennial	Other e.g. Quad Name:

A. Geomorphology (Subtotal= 4 )	Absent	Weak	Moderate	Strong
1 <sup>a.</sup> Continuity of channel bed and bank	0	(1)	2	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step- pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	(1)	2	3
5. Active/relict floodplain	(0)	1	2	3
6. Depositional bars or benches	(0)	1	2	3
7. Recent alluvial deposits	(0)	1	2	3
8. Headcuts	(0)	1	2	3
9. Grade control	0	(0.5)	1	1.5
10. Natural valley	0	(0.5)	1	1.5
11. Second or greater order channel	(No = 0)		Yes	= 3

a artificial ditches are not rated; see discussions in manual

### B. Hydrology (Subtotal = 7.5)

12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1_	(2)	3
14. Leaf litter	1.5	(1)	0.5	0
15. Sediment on plants or debris	(0)	0.5	1	1.5
16. Organic debris lines or piles	Ō	(0.5)	1	1.5
17. Soil-based evidence of high water table?	N	io = 0	Yes	= 3

#### C. Biology (Subtotal = 3.25)

18. Fibrous roots in streambed	3	2	(1)	0
19. Rooted upland plants in streambed	3	2	(1)	0
20. Macrobenthos (note diversity and abundance)	0	1	2	3
21. Aquatic Mollusks	0)	1	2	3
22. Fish	0	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0	0.5	1	1.5
25. Algae	Ö	<b>(</b> 0.5 <b>)</b>	1	1.5
26. Wetland plants in streambed		FACW = 0.75	OBL = 1.5 Other =	0

<sup>\*</sup>perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: Ephemeral stream begins in recently cutover area that drains into a perennial stream connected to Otterdam Swamp. Streams lacks continuity, evidence of stream fauna, and displays weak sinuosity and substrate particle size.

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Photograph 100: View of ephemeral stream at Stream Point 9.



Photograph 101: View of ephemeral stream at Stream Point 9.

Date: 2025-05-01	<b>Project/Site</b> : SRF Franklin - Kister Tract	<b>Latitude:</b> 36.80078701
Evaluator: Jackson Livingstone, WSSI	County: Greensville County	Longitude: -77.51629571
<b>Total Points:</b> 29 Stream is at least intermittent if $\geq$ 19 or perennial if $\geq$ 30*	Stream Determination (circle one) Ephemeral (ntermitten) Perennial	Other e.g. Quad Name:

A. Geomorphology (Subtotal= 10 )	Absent	Weak	Moderate	Strong
1 <sup>a.</sup> Continuity of channel bed and bank	0	(1)	2	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step- pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	(1)	2	3
5. Active/relict floodplain	0	1	(2)	3
6. Depositional bars or benches	(0)	1	2	3
7. Recent alluvial deposits	0	(1)	2	3
8. Headcuts	(0)	1	2	3
9. Grade control	Ō	0.5	(1)	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	No	= 0	Yes:	= 3

a artificial ditches are not rated; see discussions in manual

### B. Hydrology (Subtotal = 11 )

12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	2	(3)
14. Leaf litter	(.5)	1	0.5	0
15. Sediment on plants or debris	(0)	0.5	1	1.5
16. Organic debris lines or piles	Ō	0.5	1	<b>(</b> 1.5)
17. Soil-based evidence of high water table?	N	lo = 0	Yes	= 3

### C. Biology (Subtotal = 8 )

18. Fibrous roots in streambed	3	(2)	1	0
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macrobenthos (note diversity and abundance)	Ō	(1)	2	3
21. Aquatic Mollusks	0	1	2	3
22. Fish	0)	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0	(0.5)	1	1.5
25. Algae	0	0.5	1	<b>(</b> 1.5 <b>)</b>
26. Wetland plants in streambed		FACW = 0.75;	OBL = 1.5 Other =	0

<sup>\*</sup>perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: Stream located in a recently cut over area. Several areas of high flow were observed. The stream channel and banks appear to have been significantly compacted and disturbed. In addition, several large debris piles from recent logging were observed within the channel that likely block flow. Under normal conditions, this stream was likely perennial.

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Photograph 102: View of intermittent stream at Stream Point 10.



Photograph 103: View of intermittent stream at Stream Point 10.

Date: 2025-05-01	<b>Project/Site</b> : SRF Franklin - Kister Tract	<b>Latitude:</b> 36.79958272
Evaluator: Jackson Livingstone, WSSI	County: Greensville County	Longitude: -77.51696681
<b>Total Points:</b> 22.75 Stream is at least intermittent if ≥ 19 or perennial if ≥ 30*	Stream Determination (circle one) Ephemeral (intermittent) Perennial	Other e.g. Quad Name:

Weak	Moderate	Strong
(1)	2	3
(1)	2	3
1	2	3
(1)	2	3
1	(2)	3
1	2	3
1	2	3
1	2	3
(6.5)	1	1.5
(0.5)	1	1.5
No = 0	Yes	= 3
1	2	3
1	2	(3)
(1)	0.5	Ō
0.5	1_	1.5
0.5	(1)	1.5
No = 0	Yes	= 3
(2)	1	0
(2)	1	0
(1)	2	3
1	2	3
0.5	1	1.5
0.5	1	1.5
0.5	1	1.5
0.5	(1)	1.5
€ACW = 0.75	OBL = 1.5 Other =	= 0
nual.	0.5 CW = 0.75	0.5

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Photograph 104: View of intermittent stream at Stream Point 11.



Photograph 105: View of intermittent stream at Stream Point 11.

NC DWQ Stream Identification Form Version 4.11				
Date: 2025-05-01	<b>Project/Site</b> : SRF Franklin - Kister Tract	<b>Latitude:</b> 36.80094893		
Evaluator: Jackson Livingstone, WSSI	County: Greensville County	Longitude: -77.52602982		
<b>Total Points:</b> 24.5 Stream is at least intermittent if $\geq$ 19 or perennial if $\geq$ 30*	Stream Determination (circle one) Ephemeral (intermitten) Perennia	Other e.g. Quad Name:		
A. Geomorphology (Subtotal=11)	Absent Weak	Moderate Strong		

if $\geq$ 19 or perennial if $\geq$ 30*	Epitemeral ditermittend Perennial e.g. Quad Name.				
A. Coomorphology (Cultistate) 44	Absent	Weak	Moderate	Strong	
A. Geomorphology (Subtotal= 11 )	Absent	vvcan			
1 <sup>a.</sup> Continuity of channel bed and bank	0	1	(2)	3	
2. Sinuosity of channel along thalweg	0	(1)	2	3	
In-channel structure: ex. riffle-pool, step- pool, ripple-pool sequence	0	1	2	3	
4. Particle size of stream substrate	0	1	(2)	3	
5. Active/relict floodplain	0	(1)	2	3	
6. Depositional bars or benches	0	(1)	2	3	
7. Recent alluvial deposits	0	(1)	2	3	
8. Headcuts	(0)	1	2	3	
9. Grade control	Ō	0.5	(1)	1.5	
10. Natural valley	0	0.5	(1)	1.5	
11. Second or greater order channel	N	0 = 0	Yes = 3		
a artificial ditches are not rated; see discussions in manual					
B. Hydrology (Subtotal =8)		_			
12. Presence of Baseflow	0	1	2	3	
13. Iron oxidizing bacteria	0	1	(2)	3	
14. Leaf litter	1.5	(1)	0.5	0	
15. Sediment on plants or debris	0	(0.5)	1	1.5	
16. Organic debris lines or piles	0	(0.5)	1	1.5	
17. Soil-based evidence of high water table?	N	o = 0	Yes:	= 3	

C. Biology (Sub	total = 5.5 )

18. Fibrous roots in streambed	3	2	(1)	0
19. Rooted upland plants in streambed	3	(2)	1	0
20. Macrobenthos (note diversity and abundance)	0	(1)	2	3
21. Aquatic Mollusks	0)	1	2	3
22. Fish	0	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	Ō	0.5	1	<b>(</b> 1.5 <b>)</b>
26. Wetland plants in streambed		FACW = 0.75;	OBL = 1.5 Other =	0

<sup>\*</sup>perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: Intermittent stream that intercepts the groundwater table as it descends in elevation.

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Photograph 106: View of intermittent stream at Stream Point 12.



Photograph 107: View of intermittent stream at Stream Point 12.

Date: 2025-05-01	<b>Project/Site</b> : SRF Franklin - Kister Tract	<b>Latitude:</b> 36.80111887
Evaluator: Jillian Burgan, WSSI	County: Greensville County	Longitude: -77.52611205
<b>Total Points:</b> 14 Stream is at least intermittent if $\geq$ 19 or perennial if $\geq$ 30*	Stream Determination (circle one) Ephemera Intermittent Perennial	Other e.g. Quad Name:

A. Geomorphology (Subtotal= 6.5 )	Absent	Weak	Moderate	Strong
1 <sup>a.</sup> Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step- pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	(0)	1	2	3
5. Active/relict floodplain	Ō	1	(2)	3
6. Depositional bars or benches	(0)	1	2	3
7. Recent alluvial deposits	(0)	1	2	3
8. Headcuts	(0)	1	2	3
9. Grade control	Ō	<b>(</b> 0.5 <b>)</b>	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	N	o = 0	Yes	= 3
a artificial ditches are not rated; see discussions in manual				
B. Hydrology (Subtotal = <u>3.5</u> )	_			
12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	1	<b>(</b> 0.5)	0
15. Sediment on plants or debris	(0)	0.5	1	1.5
16 Organic dehris lines or niles		0.5	1	1.5

12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	1	(0.5)	0
15. Sediment on plants or debris	0	0.5	1	1.5
16. Organic debris lines or piles	(0)	0.5	1	1.5
17. Soil-based evidence of high water table?	No = 0		Yes	= 3

#### C. Biology (Subtotal =

18. Fibrous roots in streambed	3	2	1	(0)
19. Rooted upland plants in streambed	3	(2)	1	Ō
20. Macrobenthos (note diversity and abundance)	0	1	2	3
21. Aquatic Mollusks	0)	1	2	3
22. Fish	0	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	Ö	(0.5)	1	1.5
26. Wetland plants in streambed	FACW = 0.75; OBL = 1.5 Other = 0			

<sup>\*</sup>perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: Stream located in a recently cut over area. Stream lacks continuity and the banks and stream channel appear to have been significantly compacted and disturbed. In addition, several large debris piles from recent logging were observed within the channel that likely block flow. Under normal conditions, this stream was likely perennial.

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Photograph 108: View of ephemeral stream at Stream Point 13.



Photograph 109: View of ephemeral stream at Stream Point 13.

Date: 2025-05-08	<b>Project/Site</b> : SRF Franklin - Kister Tract	<b>Latitude:</b> 36.79208686
Evaluator: Jillian Burgan, WSSI	County: Greensville County	Longitude: -77.51293257
<b>Total Points:</b> 29.25 Stream is at least intermittent if $\geq$ 19 or perennial if $\geq$ 30*	Stream Determination (circle one) Ephemeral (ntermitten) Perennial	Other e.g. Quad Name:

A. Geomorphology (Subtotal= 12.5 )	Absent	Weak	Moderate	Strong
1 <sup>a.</sup> Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	1	2	(3)
3. In-channel structure: ex. riffle-pool, step- pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	(1)	2	3
5. Active/relict floodplain	0	1	(2)	3
6. Depositional bars or benches	(0)	1	2	3
7. Recent alluvial deposits	0	(1)	2	3
8. Headcuts	(0)	1	2	3
9. Grade control	0	<b>(</b> 2.5)	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	N	0 = 0	Yes	= 3

a artificial ditches are not rated; see discussions in manual

### B. Hydrology (Subtotal = 10)

12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1_	2	(3)
14. Leaf litter	1.5	(1)	0.5	Ö
15. Sediment on plants or debris	0	<b>(</b> 0.5 <b>)</b>	1	1.5
16. Organic debris lines or piles	0	0.5	1	1.5
17. Soil-based evidence of high water table?	N	0 = 0	Yes	= 3

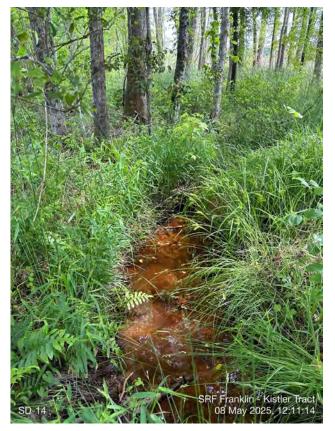
#### C. Biology (Subtotal = 6.75 )

18. Fibrous roots in streambed	3	2	(1)	0
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macrobenthos (note diversity and abundance)	0)	1	2	3
21. Aquatic Mollusks	0)	1	2	3
22. Fish	(0)	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0	0.5	(1)	1.5
25. Algae	0	0.5	(1)	1.5
26. Wetland plants in streambed	FACW = 0.75 OBL = 1.5 Other = 0			

<sup>\*</sup>perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: Intermittent stream culverted on both the northern and southern reaches and ties into Otterdam Swamp. Stream has moderately continuous bed and bank but has slow flow, high level of iron oxidizing bacteria and strong sinuosity.

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Photograph 110: View of intermittent stream at Stream Point 14.



Photograph 111: View of intermittent stream at Stream Point 14.

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Date: 2025-05-08	<b>Project/Site</b> : SRF Franklin - Kister Tract	<b>Latitude:</b> 36.79410122
Evaluator: Lindsey Shortt, WSSI	County: Greensville County	Longitude: -77.51146487
<b>Total Points:</b> 29.25 Stream is at least intermittent if $\geq$ 19 or perennial if $\geq$ 30*	Stream Determination (circle one) Ephemeral (intermitten) Perennial	Other e.g. Quad Name:

A. Geomorphology (Subtotal=11)	Absent	Weak	Moderate	Strong
1ª. Continuity of channel bed and bank	0	1	2	(3)
2. Sinuosity of channel along thalweg	0	1	2	(3)
3. In-channel structure: ex. riffle-pool, step- pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	(1)	2	3
5. Active/relict floodplain	(0)	1	2	3
6. Depositional bars or benches	(0)	1	2	3
7. Recent alluvial deposits	0	1	(2)	3
8. Headcuts	(0)	1	2	3
9. Grade control	Ö	<b>(</b> 2.5 <b>)</b>	1	1.5
10. Natural valley	0	(0.5)	1	1.5
11. Second or greater order channel	No	0 = 0	Yes	= 3

a artificial ditches are not rated; see discussions in manual

#### B. Hydrology (Subtotal = 9.5)

12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1_	2	(3)
14. Leaf litter	1.5	(1)	0.5	Ō
15. Sediment on plants or debris	0	(0.5)	1	1.5
16. Organic debris lines or piles	0	0.5	(1)	1.5
17. Soil-based evidence of high water table?	N	lo = 0	Yes	= 3

#### C. Biology (Subtotal = 8.75 )

18. Fibrous roots in streambed	3	(2)	1	0	
19. Rooted upland plants in streambed	(3)	2	1	0	
20. Macrobenthos (note diversity and abundance)	0	1	2	3	
21. Aquatic Mollusks	0)	1	2	3	
22. Fish	(0)	0.5	1	1.5	
23. Crayfish	Ō	0.5	(1)	1.5	
24. Amphibians	0	0.5	(1)	1.5	
25. Algae	0	0.5	(1)	1.5	
26. Wetland plants in streambed		ACW = 0.75 OBL = 1.5 Other = 0			

<sup>\*</sup>perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: Intermittent stream culverted on both the northern and southern reaches and ties into Otterdam Swamp. Stream has moderately continuous bed and bank but has slow flow, high level of iron oxidizing bacteria and strong sinuosity.

Sketch:			



Photograph 112: View of intermittent stream at Stream Point 15.



Photograph 113: View of intermittent stream at Stream Point 15.

Date: 2025-05-08	<b>Project/Site</b> : SRF Franklin - Kister Tract	<b>Latitude:</b> 36.79544752
Evaluator: Jillian Burgan, WSSI	County: Greensville County	Longitude: -77.51998363
<b>Total Points:</b> 15.25 Stream is at least intermittent if $\geq$ 19 or perennial if $\geq$ 30*	Stream Determination (circle one) Ephemera Intermittent Perennial	Other e.g. Quad Name:

A. Geomorphology (Subtotal= 5.5 )	Absent	Weak	Moderate	Strong
1 <sup>a.</sup> Continuity of channel bed and bank	(0)	1	2	3
2. Sinuosity of channel along thalweg	Ō	(1)	2	3
3. In-channel structure: ex. riffle-pool, step- pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	(0)	1	2	3
5. Active/relict floodplain	Ő	(1)	2	3
6. Depositional bars or benches	(0)	1	2	3
7. Recent alluvial deposits	0	1	(2)	3
8. Headcuts	(0)	1	2	3
9. Grade control	Ö	<b>(</b> 0.5 <b>)</b>	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	No = 0		Yes = 3	

B. Hydrology	(Subtotal =	7)
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12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	1	<b>(</b> 0.5)	0
15. Sediment on plants or debris	0	0.5	(1)	1.5
16. Organic debris lines or piles	0	0.5	1	(1.5)
17. Soil-based evidence of high water table?	N	lo = 0	Yes	= 3

#### C. Biology (Subtotal = 2.75 )

18. Fibrous roots in streambed	3	2	(1)	0
19. Rooted upland plants in streambed	3	2	(1)	0
20. Macrobenthos (note diversity and abundance)	0	1	2	3
21. Aquatic Mollusks	0)	1	2	3
22. Fish	0)	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0	0.5	1	1.5
25. Algae	0)	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75 OBL = 1.5 Other = 0			

<sup>\*</sup>perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: Stream located in a recently cut over area and connects downslope to a perennial stream. No continuous bed and bank and the stream channel appears to have been significantly compacted and disturbed. In addition, several large debris piles from recent logging were observed within the channel that likely block flow. Base flow likely due to sloped elevation.



Photograph 114: View of ephemeral stream at Stream Point 16.



Photograph 115: View of ephemeral stream at Stream Point 16.

Date: 2025-05-08	<b>Project/Site</b> : SRF Franklin - Kister Tract	<b>Latitude:</b> 36.79636635
Evaluator: Jillian Burgan, WSSI	County: Greensville County	Longitude: -77.5158513
<b>Total Points:</b> 15.25 Stream is at least intermittent if $\geq$ 19 or perennial if $\geq$ 30*	Stream Determination (circle one) Ephemera Intermittent Perennial	Other e.g. Quad Name:

A. Geomorphology (Subtotal= 5.5 )	Absent	Weak	Moderate	Strong
1 <sup>a.</sup> Continuity of channel bed and bank	(0)	1	2	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step- pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	(0)	1	2	3
5. Active/relict floodplain	0	(1)	2	3
6. Depositional bars or benches	0	1	2	3
7. Recent alluvial deposits	0	1	(2)	3
8. Headcuts	(0)	1	2	3
9. Grade control	0	<b>(</b> 0.5 <b>)</b>	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	No	0 = 0	Yes:	= 3

a artificial ditches are not rated; see discussions in manual

### B. Hydrology (Subtotal = \_\_\_\_7\_\_\_)

12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	(0)	1	2	3
14. Leaf litter	1.5	1	<b>(</b> 0.5)	0
15. Sediment on plants or debris	0	0.5	(1)	1.5
16. Organic debris lines or piles	0	0.5	1	(1.5)
17. Soil-based evidence of high water table?	N	lo = 0	Yes	= 3

#### C. Biology (Subtotal = 2.75 )

18. Fibrous roots in streambed	3	2	(1)	0
19. Rooted upland plants in streambed	3	2	(1)	0
20. Macrobenthos (note diversity and abundance)	0	1	2	3
21. Aquatic Mollusks	0	1	2	3
22. Fish	0)	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0	0.5	1	1.5
25. Algae	0	0.5	1	1.5
26. Wetland plants in streambed	FACW = 0.75 OBL = 1.5 Other = 0			

<sup>\*</sup>perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: Stream located in a recently cut over area and connects downslope to a perennial stream. No continuous bed and bank and the stream channel appears to have been significantly compacted and disturbed. In addition, several large debris piles from recent logging were observed within the channel that likely block flow. Base flow likely due to sloped elevation.

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Photograph 116: View of ephemeral stream at Stream Point 17.



Photograph 117: View of ephemeral stream at Stream Point 17.

Date: 2025-05-08	<b>Project/Site</b> : SRF Franklin - Kister Tract	<b>Latitude:</b> 36.79538803
Evaluator: Jillian Burgan, WSSI	County: Greensville County	Longitude: -77.51394662
<b>Total Points:</b> $37.5$ Stream is at least intermittent if $\geq 19$ or perennial if $\geq 30^*$	Stream Determination (circle one) Ephemeral Intermittent Perennial	Other e.g. Quad Name:

A. Geomorphology (Subtotal= 19.5 )	Absent	Weak	Moderate	Strong
1 <sup>a.</sup> Continuity of channel bed and bank	0	1	2	(3)
2. Sinuosity of channel along thalweg	0	1	2	(3)
3. In-channel structure: ex. riffle-pool, step- pool, ripple-pool sequence	0	1	2	3
4. Particle size of stream substrate	0	1	(2)	3
5. Active/relict floodplain	0	1	2	(3)
6. Depositional bars or benches	0	1	2	(3)
7. Recent alluvial deposits	0	1	(2)	3
8. Headcuts	(0)	1	2	3
9. Grade control	0	(0.5)	1	1.5
10. Natural valley	0	0.5	(1)	1.5
11. Second or greater order channel	No = 0		Yes	= 3

### B. Hydrology (Subtotal = 11 )

12. Presence of Baseflow	0	1	2	3
13. Iron oxidizing bacteria	0	1	(2)	3
14. Leaf litter	1.5	(1)	0.5	0
15. Sediment on plants or debris	0	0.5	(1)	1.5
16. Organic debris lines or piles	0	0.5	(1)	1.5
17. Soil-based evidence of high water table?	N	lo = 0	Yes	=3

### C. Biology (Subtotal = \_\_\_\_7\_\_\_)

18. Fibrous roots in streambed	(3)	2	1	0
19. Rooted upland plants in streambed	(3)	2	1	0
20. Macrobenthos (note diversity and abundance)	Ö	(1)	2	3
21. Aquatic Mollusks	0	1	2	3
22. Fish	0	0.5	1	1.5
23. Crayfish	0	0.5	1	1.5
24. Amphibians	0)	0.5	1	1.5
25. Algae	(0)	0.5	1	1.5
26. Wetland plants in streambed		FACW = 0.75;	OBL = 1.5 Other =	0

<sup>\*</sup>perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: Perennial stream with strong sinuosity, sandy substrate with larger pebbles, and a clear riffle-pool transition through most of the sampled reach. Stream ties into Otterdam Swamp.

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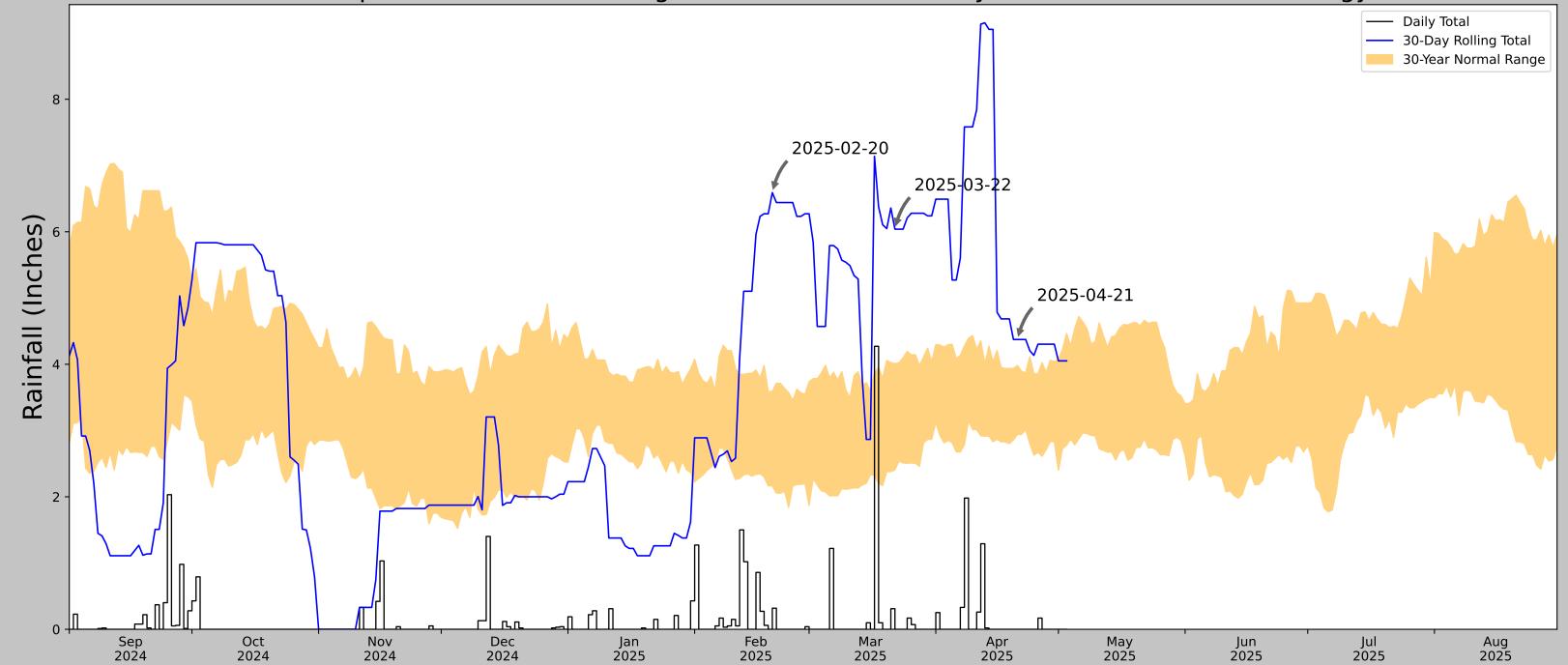


Photograph 118: View of perennial stream at Stream Point 18.



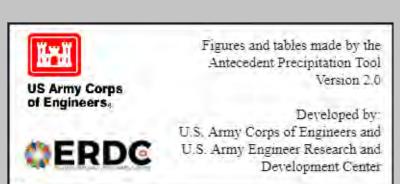
Photograph 119: View of perennial stream at Stream Point 18.

# Attachment 3: ERDC Antecedent Precipitation Tool Data

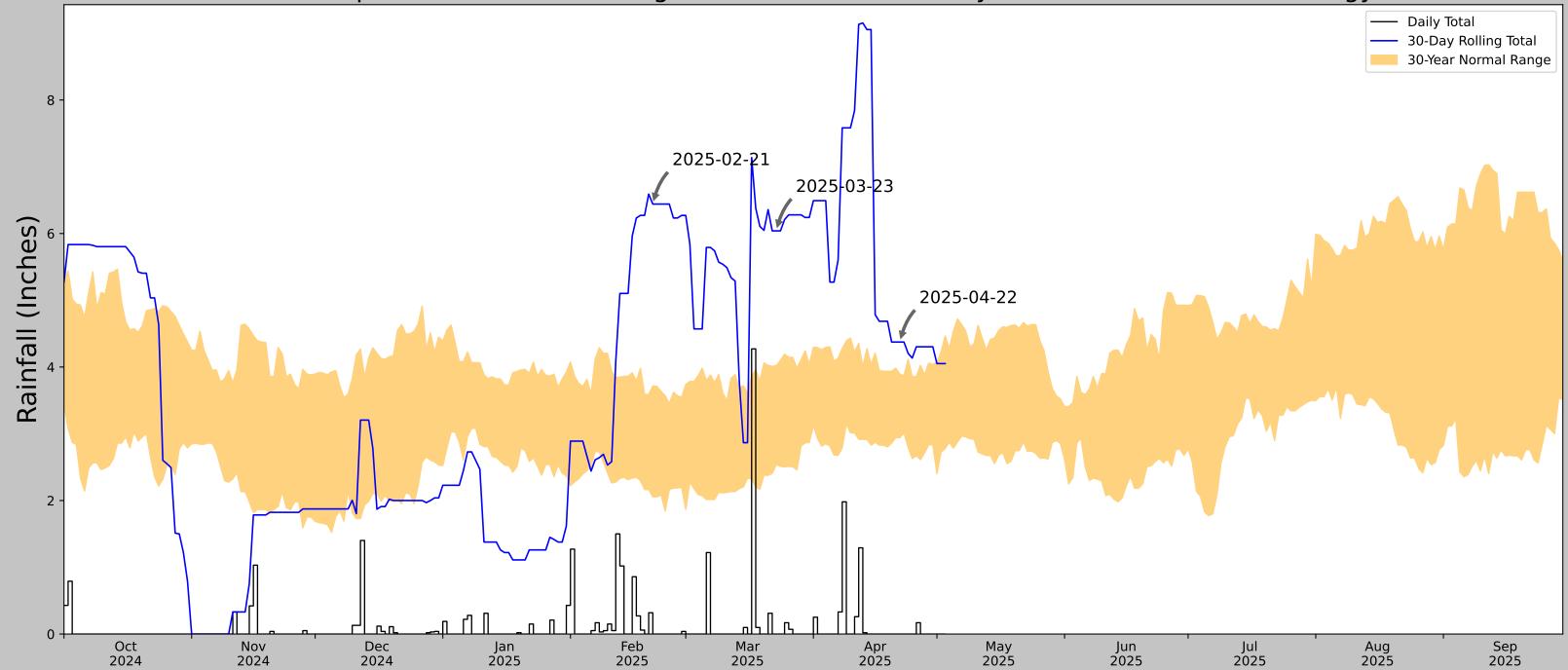


Coordinates	36.801149, -77.518893
Observation Date	2025-04-21
Elevation (ft)	130.107
Drought Index (PDSI)	Mild drought (2025-03)
WebWIMP H <sub>2</sub> O Balance	Wet Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-04-21	2.941339	3.98189	4.374016	Wet	3	3	9
2025-03-22	2.405118	4.01063	6.03937	Wet	3	2	6
2025-02-20	2.163386	3.58937	6.590551	Wet	3	1	3
Result							Wetter than Normal - 18



Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
EMPORIA 1 WNW	36.6983, -77.5597	100.066	7.457	30.041	3.58	11119	87
EMPORIA 1.3 SW	36.6796, -77.5505	143.045	1.389	42.979	0.685	35	3
DREWRYVILLE 2.3 SW	36.6923, -77.3369	127.953	12.35	27.887	5.902	63	0
EMPORIA 11.0 SW	36.5664, -77.6553	237.861	10.543	137.795	6.197	6	0
ROANOKE RAPIDS 1.2 N	36.4703, -77.6558	126.969	16.631	26.903	7.931	39	0
LAWRENCEVILLE 4.1 ESE	36.7401, -77.7805	294.948	12.565	194.882	8.103	4	0
ROANOKE RAPIDS 4.5 WNW	36.473, -77.729	133.858	18.181	33.792	8.796	66	0
ROANOKE RAPIDS	36.4789, -77.6714	209.974	16.377	109.908	9.17	21	0



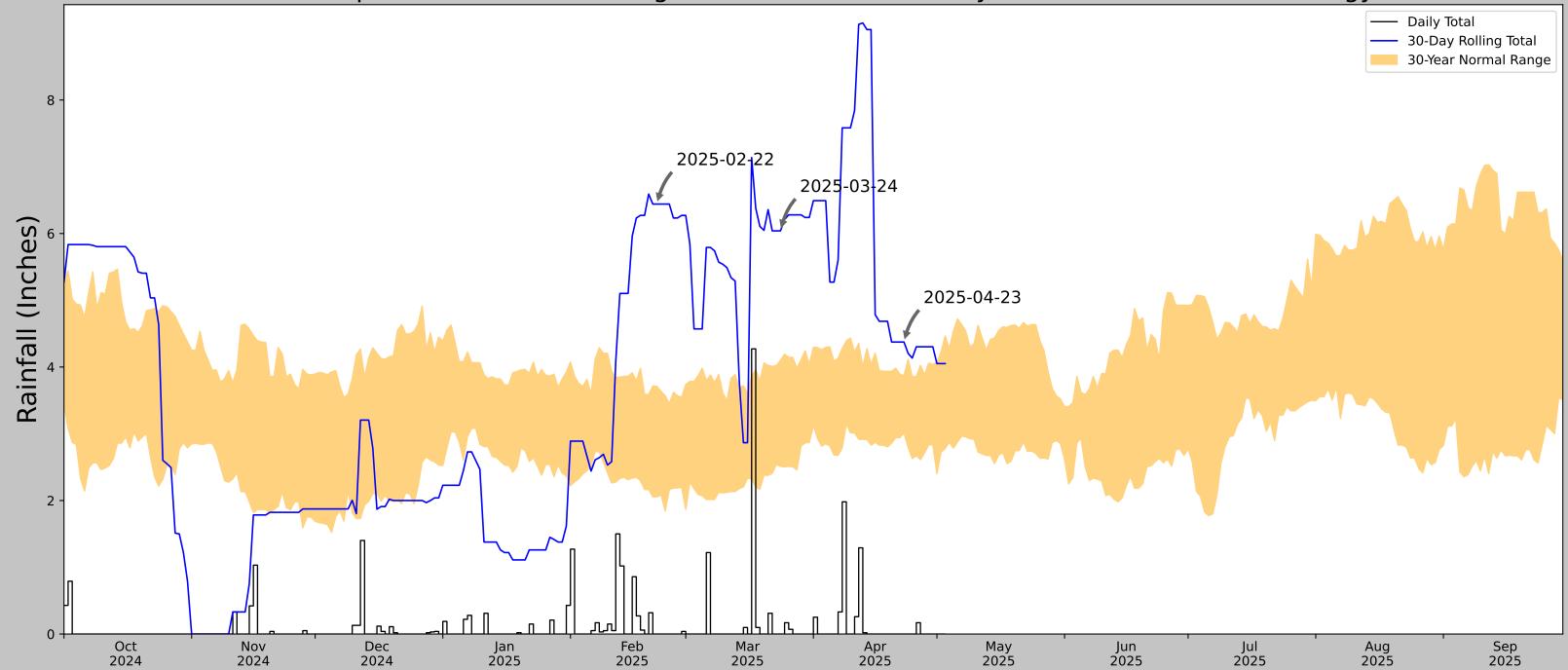
Coordinates	36.801149, -77.518893
Observation Date	2025-04-22
Elevation (ft)	130.107
Drought Index (PDSI)	Mild drought (2025-03)
WebWIMP H <sub>2</sub> O Balance	Wet Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-04-22	2.941339	3.893307	4.374016	Wet	3	3	9
2025-03-23	2.53937	4.022441	6.03937	Wet	3	2	6
2025-02-21	2.054331	3.715748	6.440945	Wet	3	1	3
Result							Wetter than Normal - 18



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
EMPORIA 1 WNW	36.6983, -77.5597	100.066	7.457	30.041	3.58	11119	86
EMPORIA 1.3 SW	36.6796, -77.5505	143.045	1.389	42.979	0.685	35	4
DREWRYVILLE 2.3 SW	36.6923, -77.3369	127.953	12.35	27.887	5.902	63	0
EMPORIA 11.0 SW	36.5664, -77.6553	237.861	10.543	137.795	6.197	6	0
ROANOKE RAPIDS 1.2 N	36.4703, -77.6558	126.969	16.631	26.903	7.931	39	0
LAWRENCEVILLE 4.1 ESE	36.7401, -77.7805	294.948	12.565	194.882	8.103	4	0
ROANOKE RAPIDS 4.5 WNW	36.473, -77.729	133.858	18.181	33.792	8.796	66	0
ROANOKE RAPIDS	36.4789, -77.6714	209.974	16.377	109.908	9.17	21	0



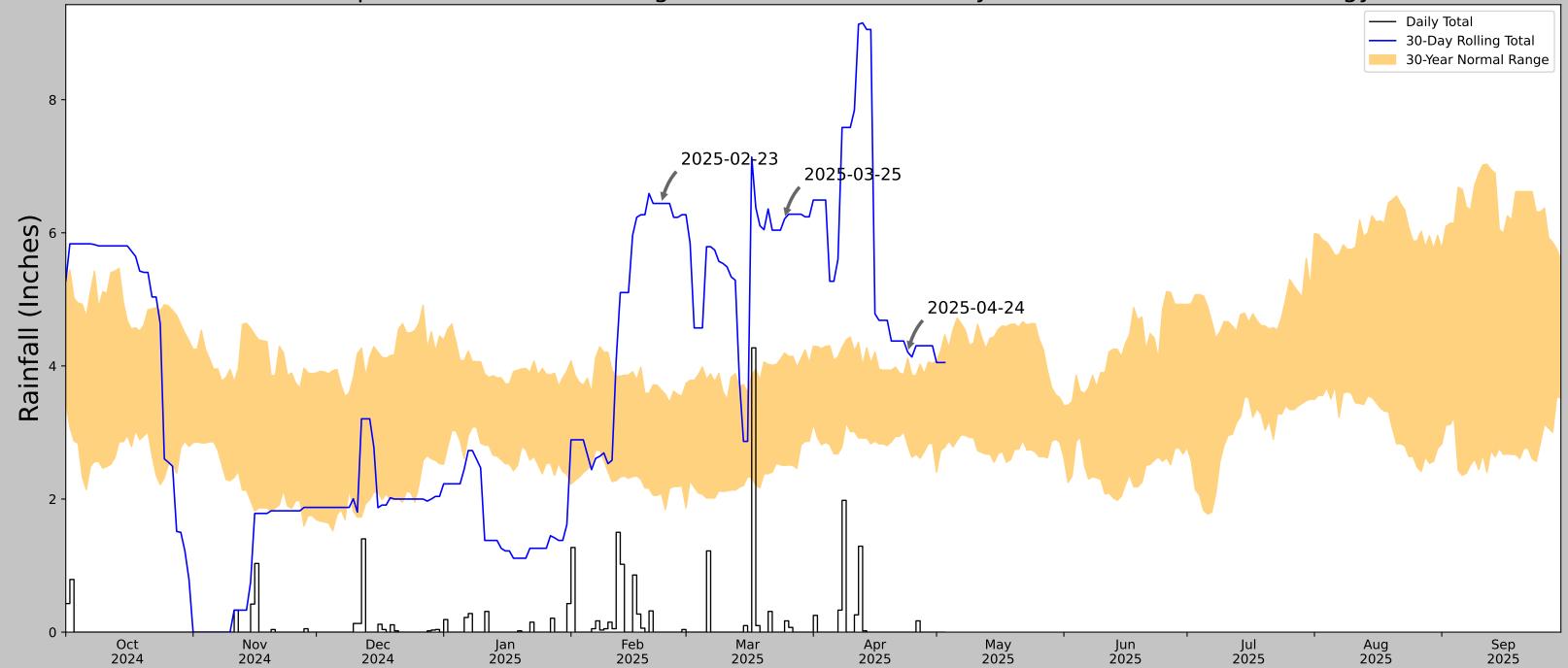
Coordinates	36.801149, -77.518893
Observation Date	2025-04-23
Elevation (ft)	130.107
Drought Index (PDSI)	Mild drought (2025-03)
WebWIMP H <sub>2</sub> O Balance	Wet Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-04-23	3.012599	3.872047	4.374016	Wet	3	3	9
2025-03-24	2.511811	4.098425	6.03937	Wet	3	2	6
2025-02-22	2.054331	3.709843	6.440945	Wet	3	1	3
Result							Wetter than Normal - 18



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
EMPORIA 1 WNW	36.6983, -77.5597	100.066	7.457	30.041	3.58	11119	86
EMPORIA 1.3 SW	36.6796, -77.5505	143.045	1.389	42.979	0.685	35	4
DREWRYVILLE 2.3 SW	36.6923, -77.3369	127.953	12.35	27.887	5.902	63	0
EMPORIA 11.0 SW	36.5664, -77.6553	237.861	10.543	137.795	6.197	6	0
ROANOKE RAPIDS 1.2 N	36.4703, -77.6558	126.969	16.631	26.903	7.931	39	0
LAWRENCEVILLE 4.1 ESE	36.7401, -77.7805	294.948	12.565	194.882	8.103	4	0
ROANOKE RAPIDS 4.5 WNW	36.473, -77.729	133.858	18.181	33.792	8.796	66	0
ROANOKE RAPIDS	36.4789, -77.6714	209.974	16.377	109.908	9.17	21	0



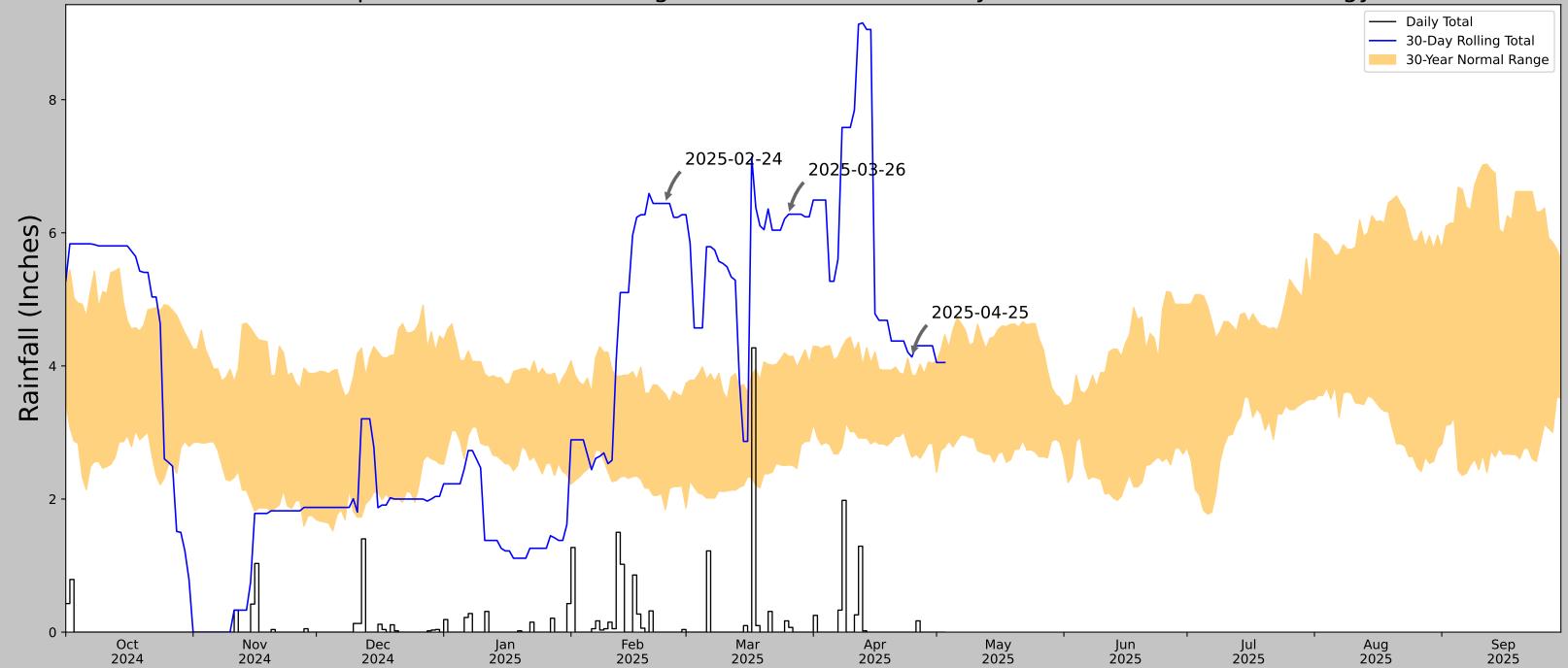
Coordinates	36.801149, -77.518893
Observation Date	2025-04-24
Elevation (ft)	130.107
Drought Index (PDSI)	Mild drought (2025-03)
WebWIMP H <sub>2</sub> O Balance	Wet Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-04-24	2.8	4.114567	4.204725	Wet	3	3	9
2025-03-25	2.504724	4.194882	6.208662	Wet	3	2	6
2025-02-23	2.083465	3.635827	6.440945	Wet	3	1	3
Result							Wetter than Normal - 18



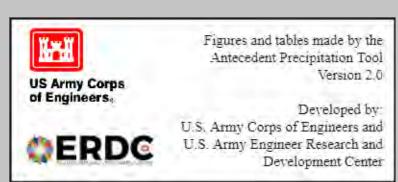
Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
EMPORIA 1 WNW	36.6983, -77.5597	100.066	7.457	30.041	3.58	11119	86
EMPORIA 1.3 SW	36.6796, -77.5505	143.045	1.389	42.979	0.685	35	4
DREWRYVILLE 2.3 SW	36.6923, -77.3369	127.953	12.35	27.887	5.902	63	0
EMPORIA 11.0 SW	36.5664, -77.6553	237.861	10.543	137.795	6.197	6	0
ROANOKE RAPIDS 1.2 N	36.4703, -77.6558	126.969	16.631	26.903	7.931	39	0
LAWRENCEVILLE 4.1 ESE	36.7401, -77.7805	294.948	12.565	194.882	8.103	4	0
ROANOKE RAPIDS 4.5 WNW	36.473, -77.729	133.858	18.181	33.792	8.796	66	0
ROANOKE RAPIDS	36.4789, -77.6714	209.974	16.377	109.908	9.17	21	0

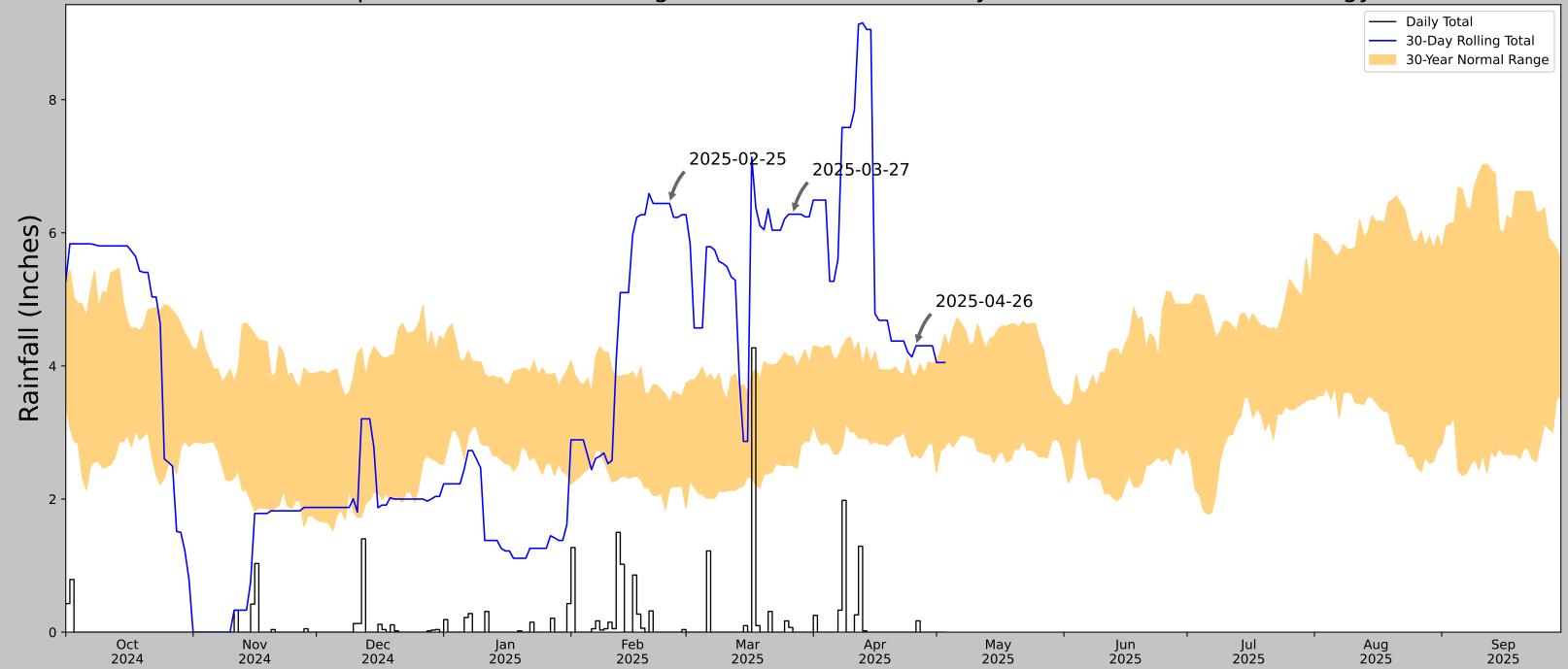


Coordinates	36.801149, -77.518893
Observation Date	2025-04-25
Elevation (ft)	130.107
Drought Index (PDSI)	Mild drought (2025-03)
WebWIMP H <sub>2</sub> O Balance	Wet Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-04-25	2.627559	3.856693	4.133858	Wet	3	3	9
2025-03-26	2.51063	4.144488	6.279528	Wet	3	2	6
2025-02-24	1.839764	3.572441	6.440945	Wet	3	1	3
Result							Wetter than Normal - 18



Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
EMPORIA 1 WNW	36.6983, -77.5597	100.066	7.457	30.041	3.58	11119	85
EMPORIA 1.3 SW	36.6796, -77.5505	143.045	1.389	42.979	0.685	35	5
DREWRYVILLE 2.3 SW	36.6923, -77.3369	127.953	12.35	27.887	5.902	63	0
EMPORIA 11.0 SW	36.5664, -77.6553	237.861	10.543	137.795	6.197	6	0
ROANOKE RAPIDS 1.2 N	36.4703, -77.6558	126.969	16.631	26.903	7.931	39	0
LAWRENCEVILLE 4.1 ESE	36.7401, -77.7805	294.948	12.565	194.882	8.103	4	0
ROANOKE RAPIDS 4.5 WNW	36.473, -77.729	133.858	18.181	33.792	8.796	66	0
ROANOKE RAPIDS	36.4789, -77.6714	209.974	16.377	109.908	9.17	21	0

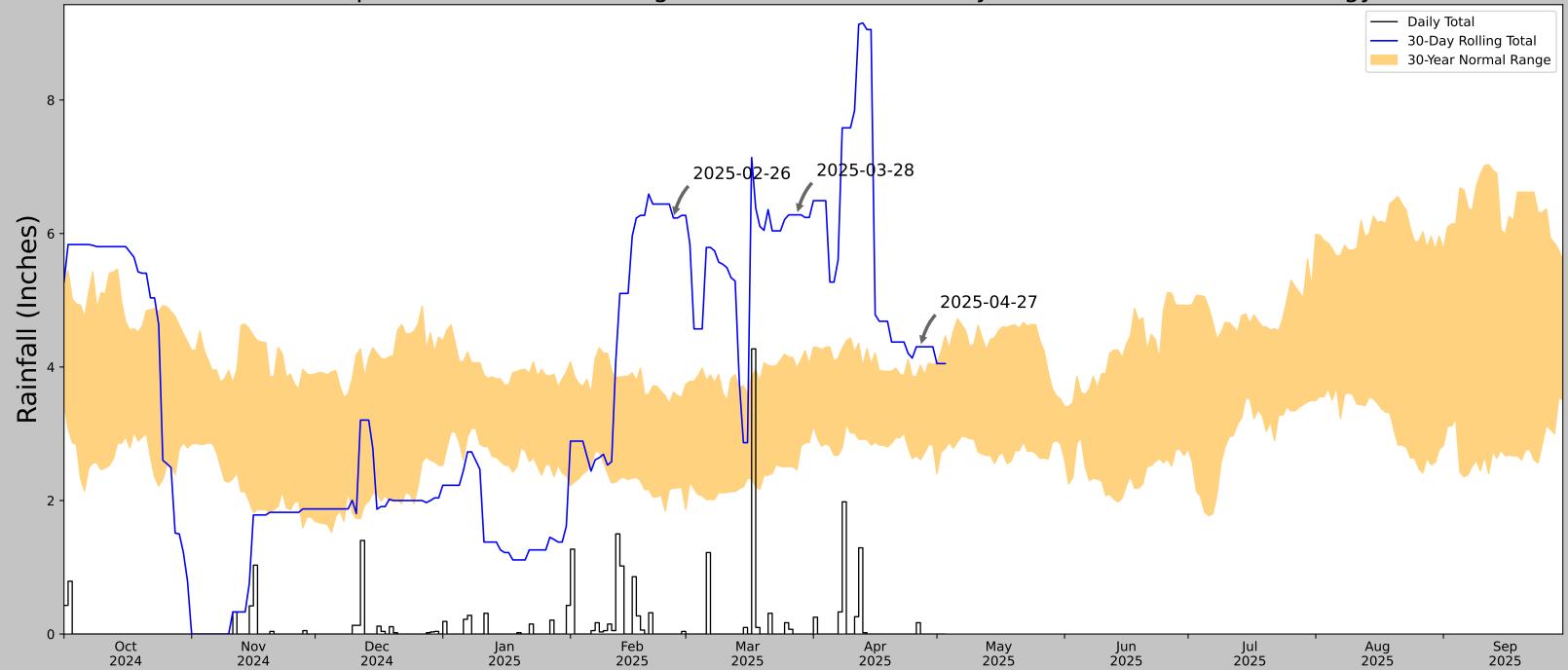


Coordinates	36.801149, -77.518893
Observation Date	2025-04-26
Elevation (ft)	130.107
Drought Index (PDSI)	Mild drought (2025-03)
WebWIMP H <sub>2</sub> O Balance	Wet Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-04-26	2.67126	3.856693	4.30315	Wet	3	3	9
2025-03-27	2.505906	4.144488	6.279528	Wet	3	2	6
2025-02-25	2.16063	3.451969	6.440945	Wet	3	1	3
Result			_				Wetter than Normal - 18

WwW	Figures and tables made by the
March .	Antecedent Precipitation Tool
US Army Corps of Engineers	Version 2.0
or Engineers.	Developed by:
	U.S. Army Corps of Engineers and
<b>ERDG</b>	U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
EMPORIA 1 WNW	36.6983, -77.5597	100.066	7.457	30.041	3.58	11119	84
EMPORIA 1.3 SW	36.6796, -77.5505	143.045	1.389	42.979	0.685	35	6
DREWRYVILLE 2.3 SW	36.6923, -77.3369	127.953	12.35	27.887	5.902	63	0
EMPORIA 11.0 SW	36.5664, -77.6553	237.861	10.543	137.795	6.197	6	0
ROANOKE RAPIDS 1.2 N	36.4703, -77.6558	126.969	16.631	26.903	7.931	39	0
LAWRENCEVILLE 4.1 ESE	36.7401, -77.7805	294.948	12.565	194.882	8.103	4	0
ROANOKE RAPIDS 4.5 WNW	36.473, -77.729	133.858	18.181	33.792	8.796	66	0
ROANOKE RAPIDS	36.4789, -77.6714	209.974	16.377	109.908	9.17	21	0

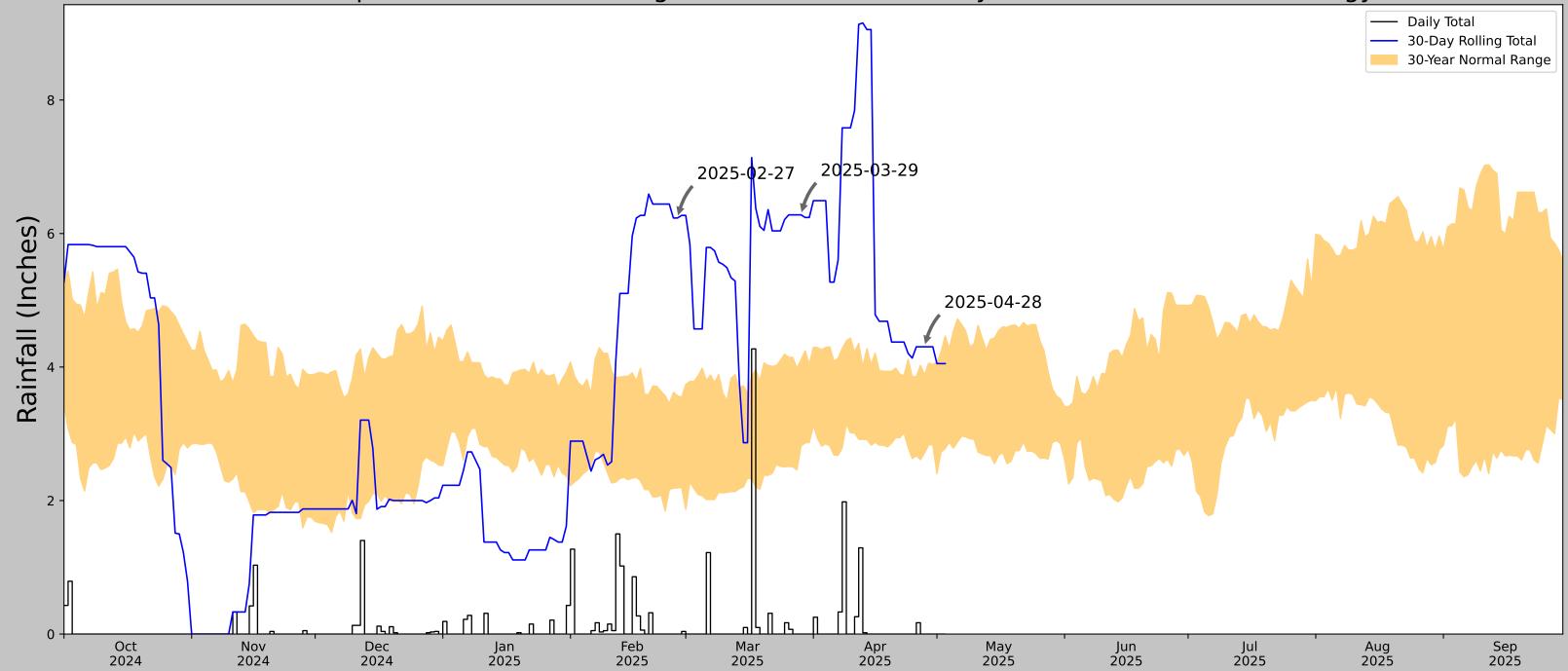


Coordinates	36.801149, -77.518893
Observation Date	2025-04-27
Elevation (ft)	130.107
Drought Index (PDSI)	Mild drought (2025-03)
WebWIMP H <sub>2</sub> O Balance	Wet Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-04-27	2.611417	4.025197	4.30315	Wet	3	3	9
2025-03-28	2.458661	3.983071	6.279528	Wet	3	2	6
2025-02-26	2.186614	3.623228	6.232284	Wet	3	1	3
Result							Wetter than Normal - 18



Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
EMPORIA 1 WNW	36.6983, -77.5597	100.066	7.457	30.041	3.58	11119	84
EMPORIA 1.3 SW	36.6796, -77.5505	143.045	1.389	42.979	0.685	35	6
DREWRYVILLE 2.3 SW	36.6923, -77.3369	127.953	12.35	27.887	5.902	63	0
EMPORIA 11.0 SW	36.5664, -77.6553	237.861	10.543	137.795	6.197	6	0
ROANOKE RAPIDS 1.2 N	36.4703, -77.6558	126.969	16.631	26.903	7.931	39	0
LAWRENCEVILLE 4.1 ESE	36.7401, -77.7805	294.948	12.565	194.882	8.103	4	0
ROANOKE RAPIDS 4.5 WNW	36.473, -77.729	133.858	18.181	33.792	8.796	66	0
ROANOKE RAPIDS	36.4789, -77.6714	209.974	16.377	109.908	9.17	21	0



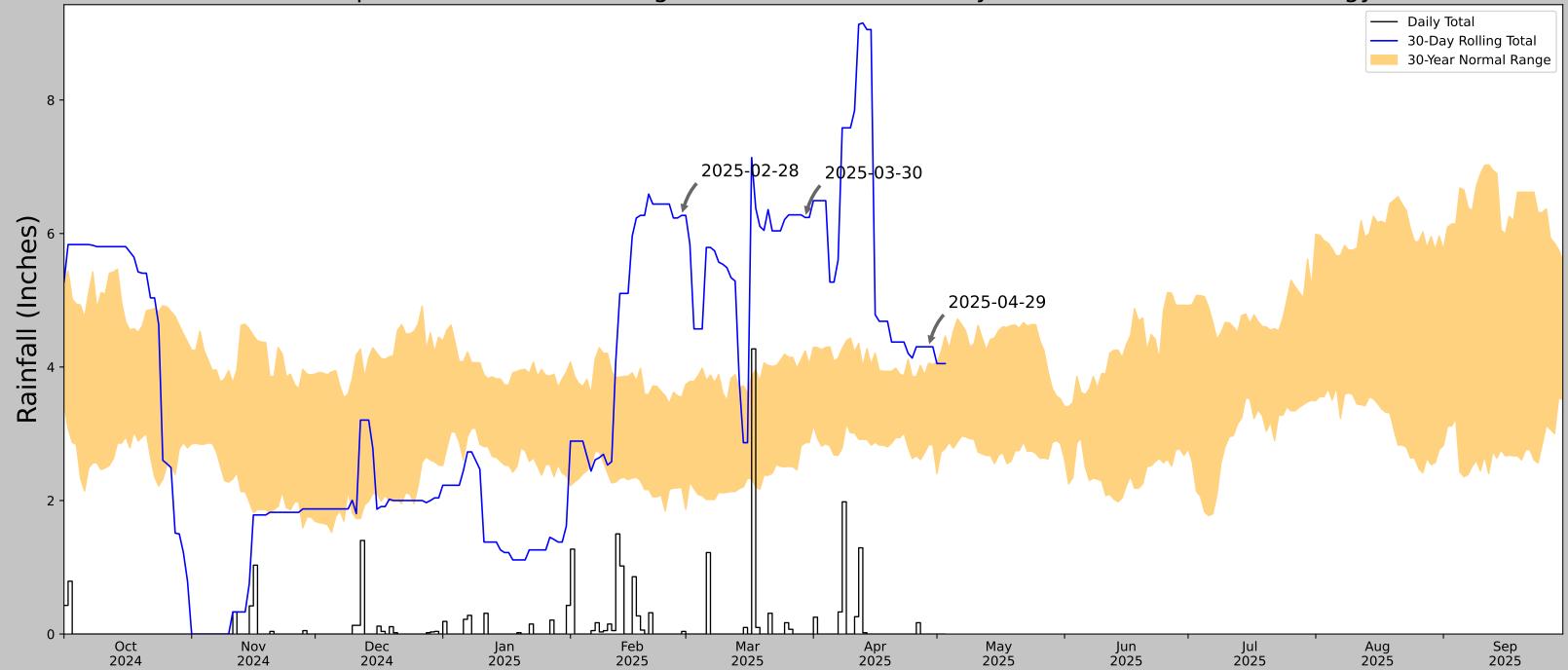
Coordinates	36.801149, -77.518893
Observation Date	2025-04-28
Elevation (ft)	130.107
Drought Index (PDSI)	Mild drought (2025-03)
WebWIMP H <sub>2</sub> O Balance	Wet Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-04-28	2.711024	3.883858	4.30315	Wet	3	3	9
2025-03-29	2.812599	4.108268	6.279528	Wet	3	2	6
2025-02-27	2.186614	3.570866	6.232284	Wet	3	1	3
Result							Wetter than Normal - 18

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Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
EMPORIA 1 WNW	36.6983, -77.5597	100.066	7.457	30.041	3.58	11119	84
EMPORIA 1.3 SW	36.6796, -77.5505	143.045	1.389	42.979	0.685	35	6
DREWRYVILLE 2.3 SW	36.6923, -77.3369	127.953	12.35	27.887	5.902	63	0
EMPORIA 11.0 SW	36.5664, -77.6553	237.861	10.543	137.795	6.197	6	0
ROANOKE RAPIDS 1.2 N	36.4703, -77.6558	126.969	16.631	26.903	7.931	39	0
LAWRENCEVILLE 4.1 ESE	36.7401, -77.7805	294.948	12.565	194.882	8.103	4	0
ROANOKE RAPIDS 4.5 WNW	36.473, -77.729	133.858	18.181	33.792	8.796	66	0
ROANOKE RAPIDS	36.4789, -77.6714	209.974	16.377	109.908	9.17	21	0



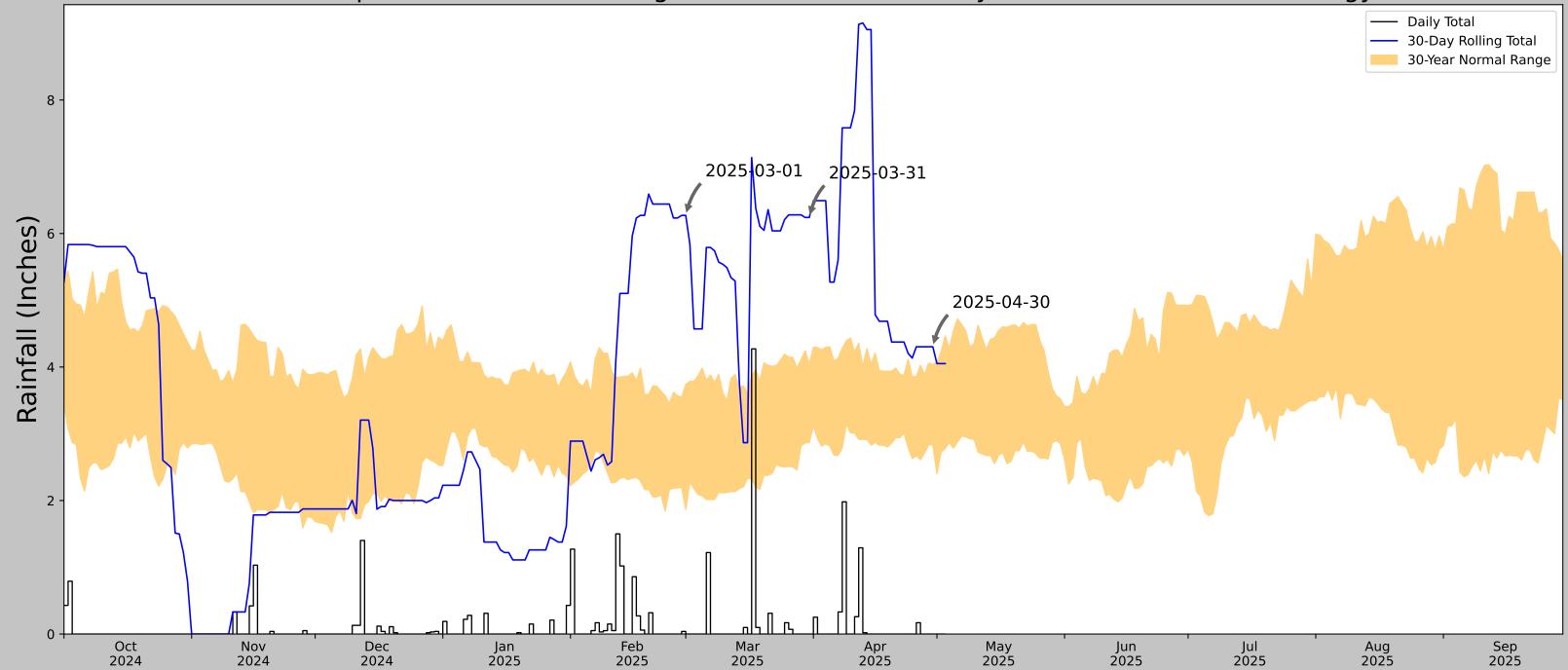
Coordinates	36.801149, -77.518893
Observation Date	2025-04-29
Elevation (ft)	130.107
Drought Index (PDSI)	Mild drought (2025-03)
WebWIMP H <sub>2</sub> O Balance	Wet Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-04-29	2.832677	4.061024	4.30315	Wet	3	3	9
2025-03-30	2.866142	4.243307	6.240158	Wet	3	2	6
2025-02-28	2.198819	3.547244	6.271654	Wet	3	1	3
Result							Wetter than Normal - 18



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
EMPORIA 1 WNW	36.6983, -77.5597	100.066	7.457	30.041	3.58	11119	84
EMPORIA 1.3 SW	36.6796, -77.5505	143.045	1.389	42.979	0.685	35	6
DREWRYVILLE 2.3 SW	36.6923, -77.3369	127.953	12.35	27.887	5.902	63	0
EMPORIA 11.0 SW	36.5664, -77.6553	237.861	10.543	137.795	6.197	6	0
ROANOKE RAPIDS 1.2 N	36.4703, -77.6558	126.969	16.631	26.903	7.931	39	0
LAWRENCEVILLE 4.1 ESE	36.7401, -77.7805	294.948	12.565	194.882	8.103	4	0
ROANOKE RAPIDS 4.5 WNW	36.473, -77.729	133.858	18.181	33.792	8.796	66	0
ROANOKE RAPIDS	36.4789, -77.6714	209.974	16.377	109.908	9.17	21	0



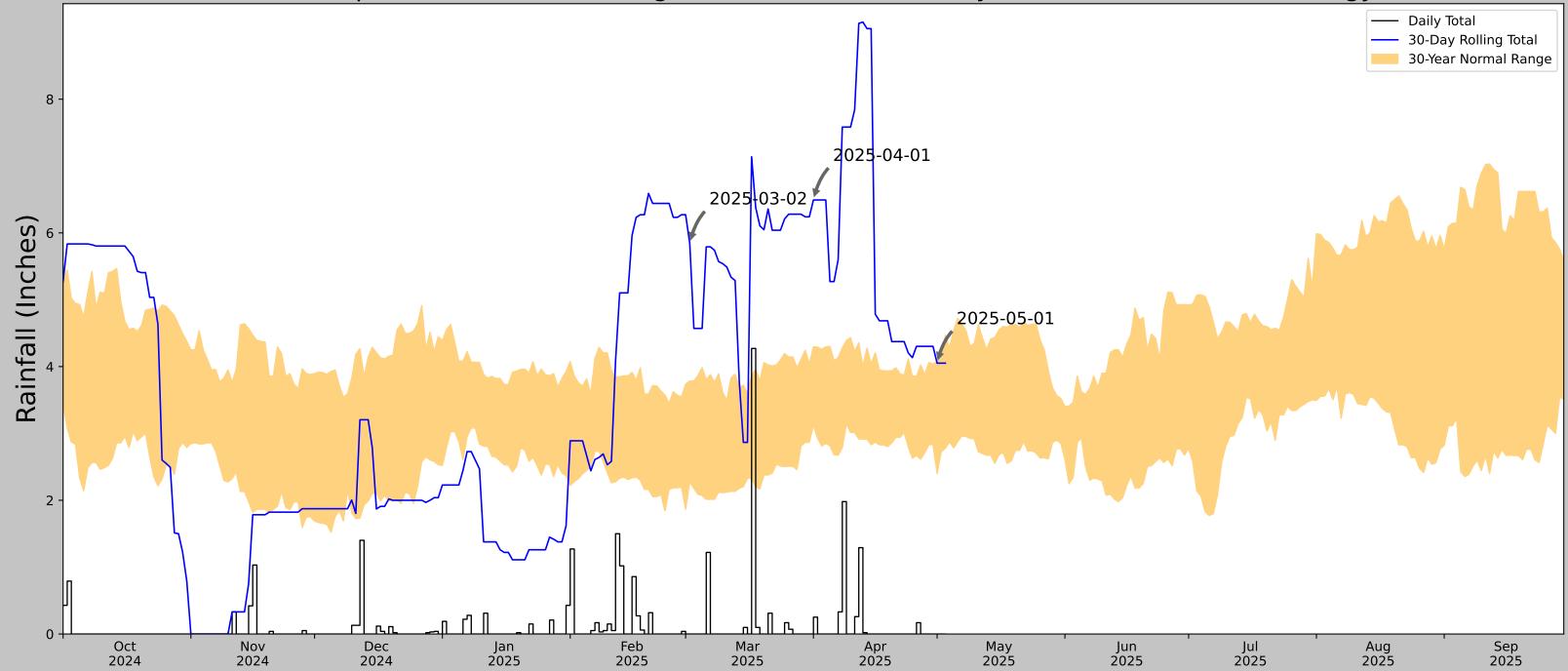
Coordinates	36.801149, -77.518893
Observation Date	2025-04-30
Elevation (ft)	130.107
Drought Index (PDSI)	Mild drought (2025-03)
WebWIMP H <sub>2</sub> O Balance	Wet Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-04-30	2.832677	4.038977	4.30315	Wet	3	3	9
2025-03-31	2.866142	4.040158	6.240158	Wet	3	2	6
2025-03-01	1.866535	3.737402	6.271654	Wet	3	1	3
Result							Wetter than Normal - 18



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
EMPORIA 1 WNW	36.6983, -77.5597	100.066	7.457	30.041	3.58	11119	84
EMPORIA 1.3 SW	36.6796, -77.5505	143.045	1.389	42.979	0.685	35	6
DREWRYVILLE 2.3 SW	36.6923, -77.3369	127.953	12.35	27.887	5.902	63	0
EMPORIA 11.0 SW	36.5664, -77.6553	237.861	10.543	137.795	6.197	6	0
ROANOKE RAPIDS 1.2 N	36.4703, -77.6558	126.969	16.631	26.903	7.931	39	0
LAWRENCEVILLE 4.1 ESE	36.7401, -77.7805	294.948	12.565	194.882	8.103	4	0
ROANOKE RAPIDS 4.5 WNW	36.473, -77.729	133.858	18.181	33.792	8.796	66	0
ROANOKE RAPIDS	36.4789, -77.6714	209.974	16.377	109.908	9.17	21	0



Coordinates	36.801149, -77.518893
Observation Date	2025-05-01
Elevation (ft)	130.107
Drought Index (PDSI)	Not available (2025-04)
WebWIMP H <sub>2</sub> O Balance	Wet Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-05-01	2.401969	4.074803	4.051181	Normal	2	3	6
2025-04-01	3.12441	4.296063	6.492126	Wet	3	2	6
2025-03-02	2.275984	3.784252	5.84252	Wet	3	1	3
Result							Wetter than Normal - 15

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Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
EMPORIA 1 WNW	36.6983, -77.5597	100.066	7.457	30.041	3.58	11119	84
EMPORIA 1.3 SW	36.6796, -77.5505	143.045	1.389	42.979	0.685	35	6
DREWRYVILLE 2.3 SW	36.6923, -77.3369	127.953	12.35	27.887	5.902	63	0
EMPORIA 11.0 SW	36.5664, -77.6553	237.861	10.543	137.795	6.197	6	0
ROANOKE RAPIDS 1.2 N	36.4703, -77.6558	126.969	16.631	26.903	7.931	39	0
LAWRENCEVILLE 4.1 ESE	36.7401, -77.7805	294.948	12.565	194.882	8.103	4	0
ROANOKE RAPIDS 4.5 WNW	36.473, -77.729	133.858	18.181	33.792	8.796	66	0
ROANOKE RAPIDS	36.4789, -77.6714	209.974	16.377	109.908	9.17	21	0